

# LAND RECLAMATION COMMISSION

## STATE OF MISSOURI

P.O. BOX 176  
JEFFERSON CITY, MISSOURI 65102  
573-751-4041

### Permit to Engage in Surface Mining

LAND RECLAMATION COMMISSION

ISSUES TO

A.P. GREEN REFRACTORIES, INC.

Pursuant to "The Land Reclamation Act," RSMo, 2001, and on conformity with the statements in the application, a permit is hereby granted to engage in surface mining of clay in the state of Missouri. The extent of the proposed mining operation(s) will be on 147 acres, more or less. The locations of the operation(s) under this permit is/are as follows: Renewal

See Attached List

This permit may be suspended or revoked upon violation of any or all of the conditions set forth in "The Land Reclamation Act," RSMo, 2001, or in such rules and regulations as are promulgated pursuant thereto by the Land Reclamation Commission.

IN WITNESS WHEREOF I have hereunto set my hand this 18th day of October 2004

  
\_\_\_\_\_  
DIRECTOR OF STAFF  
Land Reclamation Commission

Permit No 0118  
Effective Date 10/18/2004  
Expiration Date 07/31/2005

MO 780-1122 (6-95)

**Permit Number 0118      Expiration Date – 07/31/2005**[illegible]



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

RECEIVED

PERMIT RENEWAL FORM FOR INDUSTRIAL MINERAL MINES 1 8 2004

P.O. BOX 176  
JEFFERSON CITY, MO 65102-0176

NAME OF CORPORATION, COMPANY, PARTNERSHIP OR INDIVIDUAL

A.P. Green Industries

MISSOURI LAND RECLAMATION COMMISSION

8/9/04

ADDRESS 1301 Westminster Avenue	CITY Fulton	STATE MO	ZIP CODE 65251
CONTACT PERSON David Keller		TELEPHONE 573.642.8787 x 25	

FEES: COMPLETE SECTION I OR SECTION II

Section I. Fees: Open pit operators and those mining more than five thousand (5,000) tons of sand and/or gravel:

1. To compute the site fee complete the columns and lines below:

SITE NAME OR NUMBER (add a separate sheet for additional sites)	Mark each month that the site will be operated during the permit year Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	For sites operated less than six (6) months per permit year pay \$150.00
		For sites operated six (6) months or more per permit year pay \$300.00
1.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
2.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
3.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
4.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
5.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
6.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
7.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
8.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
9.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
10.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
TOTAL SITE FEE		\$ 1950.00

See attached

2. Acreage fee: \$5 X 146 number of acres bonded \$ 730.00 735

3. Annual permit fee: \$ 500.00

4. Total Fee: Add totals from 1, 2, and 3 \$ 3180.00

NOTE: If Total Fee exceeds \$2,500.00 then pay only -----\$2,500.00

SECTION II. FEES: Sand and/or gravel operators mining less than five thousand (5,000) tons per year:

1. Annual Permit Fee-----\$ 300.00

SIGNATURE OF APPLICANT <i>David Keller</i>	TITLE Geologist	DATE 8/9/04
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Appeared before me this 9 day of Aug, 2004. David Keller to me personally known, who executed the above as their free act and deeds.

NOTARY PUBLIC EMBOSSEER SEAL	STATE MO.	COUNTY (OR CITY OF ST. LOUIS) Audrain
	SUBSCRIBED AND SWORN BEFORE ME, THIS 9th DAY OF Aug 20 04	
	NOTARY PUBLIC SIGNATURE <i>Anna Lee Martin</i> (NOTARY PUBLIC NAME(TYPED OR PRINTED)) Anna Lee Martin	MY COMMISSION EXPIRES 10-6-04

RUBBER STAMP CLEAR AREA BELOW  
**ANNA LEE MARTIN**  
NOTARY PUBLIC - STATE OF MISSOURI  
MY COMMISSION EXPIRES 10/6/2004  
AUDRAIN COUNTY

FOR DEPARTMENT USE ONLY APPROVED BY <i>[Signature]</i>	DATE APPROVED 9-16-04	PERMIT NUMBER 0118	EXPIRATION DATE 7-31-05
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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
SITE INFORMATION FORM

RECEIVED  
AUG 11 1999  
MISSOURI LAND RECLAMATION COMMISSION

P.O. BOX 176  
JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>S. Baker</b>		PERMIT NUMBER <b>118</b>
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>		
COUNTY <b>Maries</b>	1/4 SECTION <b>SE 1/4</b>	SECTION <b>23</b>
TOWNSHIP <b>41 N</b>	RANGE <b>7 W</b>	ACRES <b>8</b>
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)		
MINERAL COMMODITY <b>Fire Clay</b>		ESTIMATED TONS/YEAR (FOR GRAVEL SITES)
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>Mr. Danny Schaeperkoetter</b>		
ADDRESS <b>RFD #1</b>		
CITY <b>Bland</b>	STATE <b>MO</b>	ZIP CODE <b>65014</b>
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):		DATE OF AGREEMENT
<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT		
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc.</b>		
ADDRESS <b>P.O. Box 430</b>		
CITY <b>Fulton</b>	STATE <b>Missouri</b>	ZIP CODE <b>65251</b>
SOURCE OF RIGHT TO MINE (CHECK ONE): <input checked="" type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):		DATE OF AGREEMENT <b>08/04/48</b>
<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT		
NOTE: Each site must be sown on a map and be included in a public notice and an approved mine plan.		

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

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AUG 11 1999

TYPE OF PLAN (CHECK ONE):

MISSOURI LAND  
RECLAMATION COMMISSION

☐ SHORT TERM, FOR ONE PERMIT YEAR

☒ LONG TERM, FOR PERIOD THROUGH DATE: 12/31/2050

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY.

The soil type is loam. Vegetation consist of fescue with and some annual weed species. No timber is located on the permit area. The topography is level with less than a 5% slope.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

## B. SPOIL

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

Spoil will be stockpiled adjacent to the excavation and within the permit boundary. Upon the completion of mining the spoil will be pushed or hauled back into the final excavation. The spoil will be covered by water as part of the final reclamation.

## C. ACID MATERIALS

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

## PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

(See site maps)

YES NO

☒☐

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐☒

Will any excavation start at or within fifty feet (50') of any property line?

(NOTE: If the answer is "yes", a safety barrier may be needed.)

RECLAMATION PLAN - 10 CSR 40-10.0 2)(D)2.

A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1

Mixture #1

PURPOSE OR LAND USE

Agriculture

MISSOURI LAND  
RECLAMATION COMMISSION

SEEDING OR PLANT TIME

Fall

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIE	STEMS/ACRE
Tall Fescue	25		
Red Clover	5		
Lespedeza	5		
Wheat or Oats	30		

VEGETATION MIX #2

Mixture #2

PURPOSE OR LAND USE

Agriculture

B. SEEDING OR PLANTING TIME

Spring

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIE	STEMS/ACRE
Orchard Grass	10		
Timothy	10		
Korean Lespedeza	6		
Wheat or Oats	30		
Serecea Lespedeza (On Slopes)	20		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will be graded within one year of the expiration of the permit during which the disturbance occurred.

**REPLACEMENT OF TOPSOIL**

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

**REVEGETATION**

The site will be seeded in the fall or spring after topsoil replacement.

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JUL 06 1999  
MISSOURI LAND  
RECLAMATION COMMISSION

**AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)**

-12"

**D. USE OF LAND WHEN RECLAIMED**

*Estimate acreage of each land use below, after reclamation:*

**ESTIMATED ACRES:**

Wildlife (forest or other habitat with livestock excluded)

0

Agricultural (pasture, cropland, and horticultural)

6

Development (residential, industrial, and recreational)

0

Water impoundments (for wildlife, agricultural, or development)

2


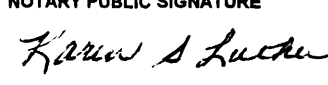


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AUG 11 1999

By my signature, I attest to the following:

MISSOURI LAND  
RECLAMATION COMMISSION

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

SIGNATURE OF APPLICANT 		TITLE Mining Supervisor - Western District Mines	
NOTARY PUBLIC EMBOSSEER SEAL	STATE Missouri		COUNTY (OR CITY OF ST. LOUIS) Callaway
	SUBSCRIBED AND SWORN BEFORE ME. THIS 10th DAY OF August 19 99		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE 	MY COMMISSION EXPIRES 7/18/2003	
	NOTARY PUBLIC NAME (TYPED OR PRINTED) Karen S. Luther		
APPROVED BY (DIRECTOR'S REPRESENTATIVE)		DATE APPROVED	PERMIT NUMBER

# WELCH REAL ESTATE



**JOHN and DEE WELCH**  
**Realtors**



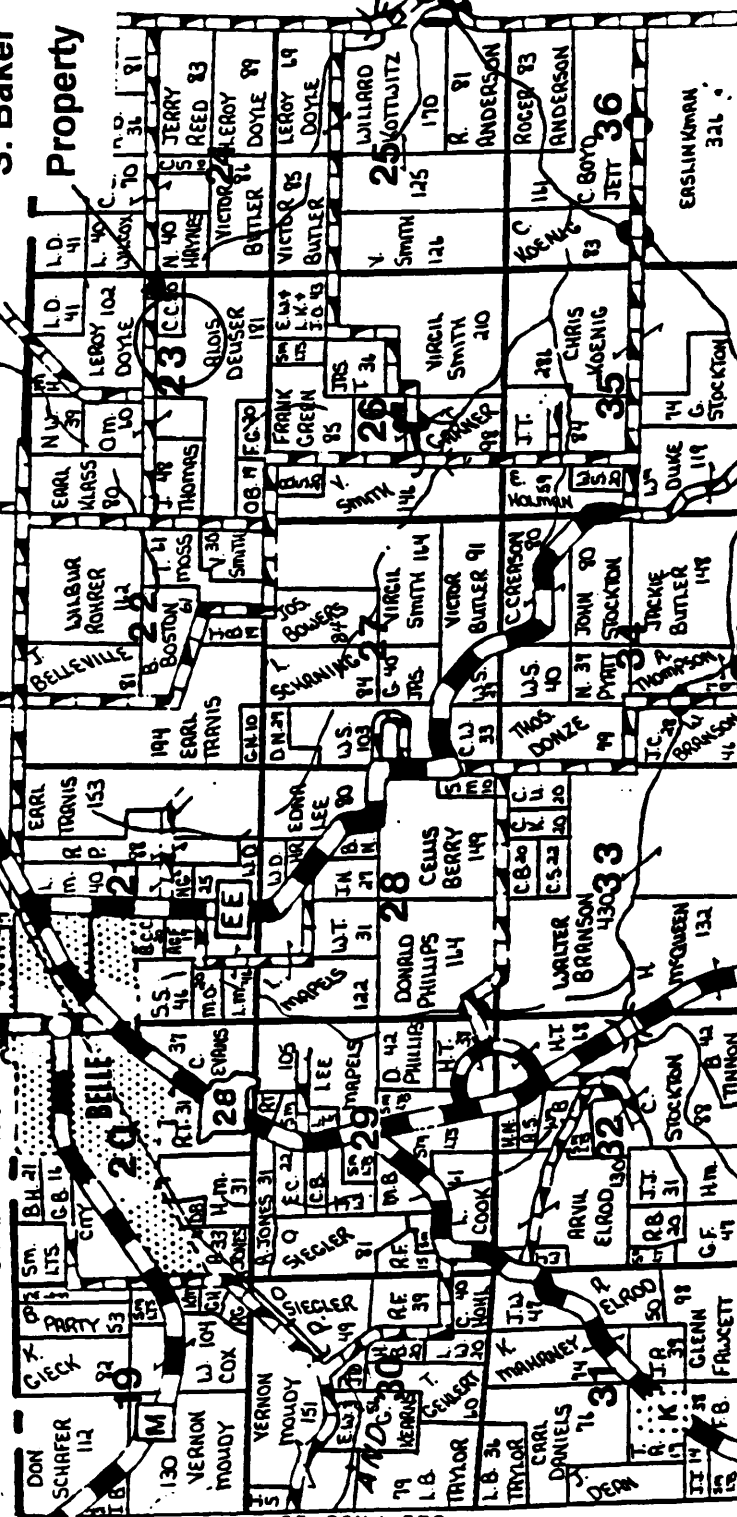
**Hwy. 68 North  
St. James, Mo.**

Office (314) 265 - 4400  
Home (314) 699 - 4149

**TOWNSHIP 41 RANGE 7**

**S. Baker**  
**Property**

OSAGE COUNTY



SEE PAGE 11

SEE PAGE 17

**ALL RIGHTS RESERVED**

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SEP 03 1999

MISSOURI LAND  
RECLAMATION COMMISSION

A.P. Green Reclamation, Inc.

P. O. Box 430, Fulton, Missouri 65251

Property:

S. Baker

Project:

Land Reclamation Permit  
Final Land Use

Location: Sect. 23. T. 41 N., R. 7 W.

Maries

County

Designed by: DJK

Date: May 12, 1999

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RECLAMATION COMMISSION

(Original 3 acre reservation)

Backfill area

Private Road

County Road

1043

1039

8 acres

Dam

Agricultural

Permit Boundary

Impoundment

Final land use legend



Wildlife



Agriculture



Development



Water Impoundment

1"=500'

MAGNETIC

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
SITE INFORMATION FORM

RECEIVED  
MAR 15 2000  
MISSOURI LAND  
RECLAMATION COMMISSION

P.O. BOX 176  
JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>Blum/Sieger</b>		PERMIT NUMBER <b>118</b>
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>		
COUNTY <b>Audrain</b>	1/4 SECTION <b>NW,SE and SW 1/4</b>	SECTION <b>33</b>
TOWNSHIP <b>52 N</b>	RANGE <b>8 W</b>	ACRES <b>57</b>
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)		
MINERAL COMMODITY <b>Fire Clay</b>		ESTIMATED TONS/YEAR (FOR GRAVEL SITES)
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>A. P. Green Industries, Inc.</b>		
ADDRESS <b>P. O. Box 430</b>		
CITY <b>Fulton</b>	STATE <b>MO</b>	ZIP CODE <b>65251</b>
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):		DATE OF AGREEMENT
<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT		
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc.</b>		
ADDRESS <b>P.O. Box 430</b>		
CITY <b>Fulton</b>	STATE <b>Missouri</b>	ZIP CODE <b>65251</b>
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input type="checkbox"/> MINERAL DEED <input checked="" type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):		DATE OF AGREEMENT <b>12/29/50</b> <b>05/03/71</b>
<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT		
NOTE: Each site must be sown on a map and be included in a public notice and an approved mine plan.		

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

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MISSOURI LAND  
RECLAMATION COMMISSION

TYPE OF PLAN (CHECK ONE):

☐ SHORT TERM, FOR ONE PERMIT YEAR

☒ LONG TERM, FOR PERIOD THROUGH DATE: 08/01/2039

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY

The site is primarily utilized to produce row crops. A small number of grass or timbered draws exist on the site. Soil are primarily clay loams and less than 12 inches deep. Slopes are generally 5 % or less except in or near the drainage draws.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

## B. SPOIL

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

These deposits are continuous and bedded so that we generally have an adjoining mined out section where spoil is deposited and stored. Spoil is removed from the active site by front-end loaders and trucks and hauled to the inactive site. Should no previously mined out site exist the spoil the spoil will be temporarily stored where it can be dozed back into the excavation when mining is complete.

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RECLAMATION COMMISSION

## C. ACID MATERIALS

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

## PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)

DESCRIBE LOCATION AND ORIENTATION OF PIT. IF NOT CLEAR ON SITE MAPS

(See site maps)

YES

NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☒☐

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

## A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1	PURPOSE OR LAND USE	B. SEEDING OR PLANT TIME
Mixture #1	Row Crop	Fall

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Generally tilled with typical agricultural farming equipment and planted or seed with equipment customarily used in row crop production.

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MISSOURI LAND  
RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Corn Grain Sorghum Wheat Soybeans	15 8 100 60		

VEGETATION MIX #2	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
Mixture #2	Pasture	Spring

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Alfalfa Orchard Grass Timothy Wheat or Oats Serecea Lespedeza (On Slopes)	10 10 6 30 20		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. Impoundments will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

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MAR 15 2000  
MISSOURI LAND  
RECLAMATION COMMISSION

**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will be graded within one year of the expiration of the permit during which the disturbance occurred.

**REPLACEMENT OF TOPSOIL**

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

**REVEGETATION**

The site will be seeded in the fall or spring after topsoil replacement.

**AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)**

-12"

**D. USE OF LAND WHEN RECLAIMED**

Estimate acreage of each land use below, after reclamation:

**ESTIMATED ACRES:**

Wildlife (forest or other habitat with livestock excluded)

0

Agricultural (pasture, cropland, and horticultural)

42

Development (residential, industrial, and recreational)

2

Water impoundments (for wildlife, agricultural, or development)

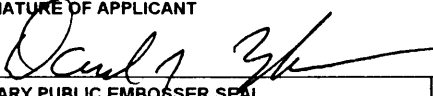

13

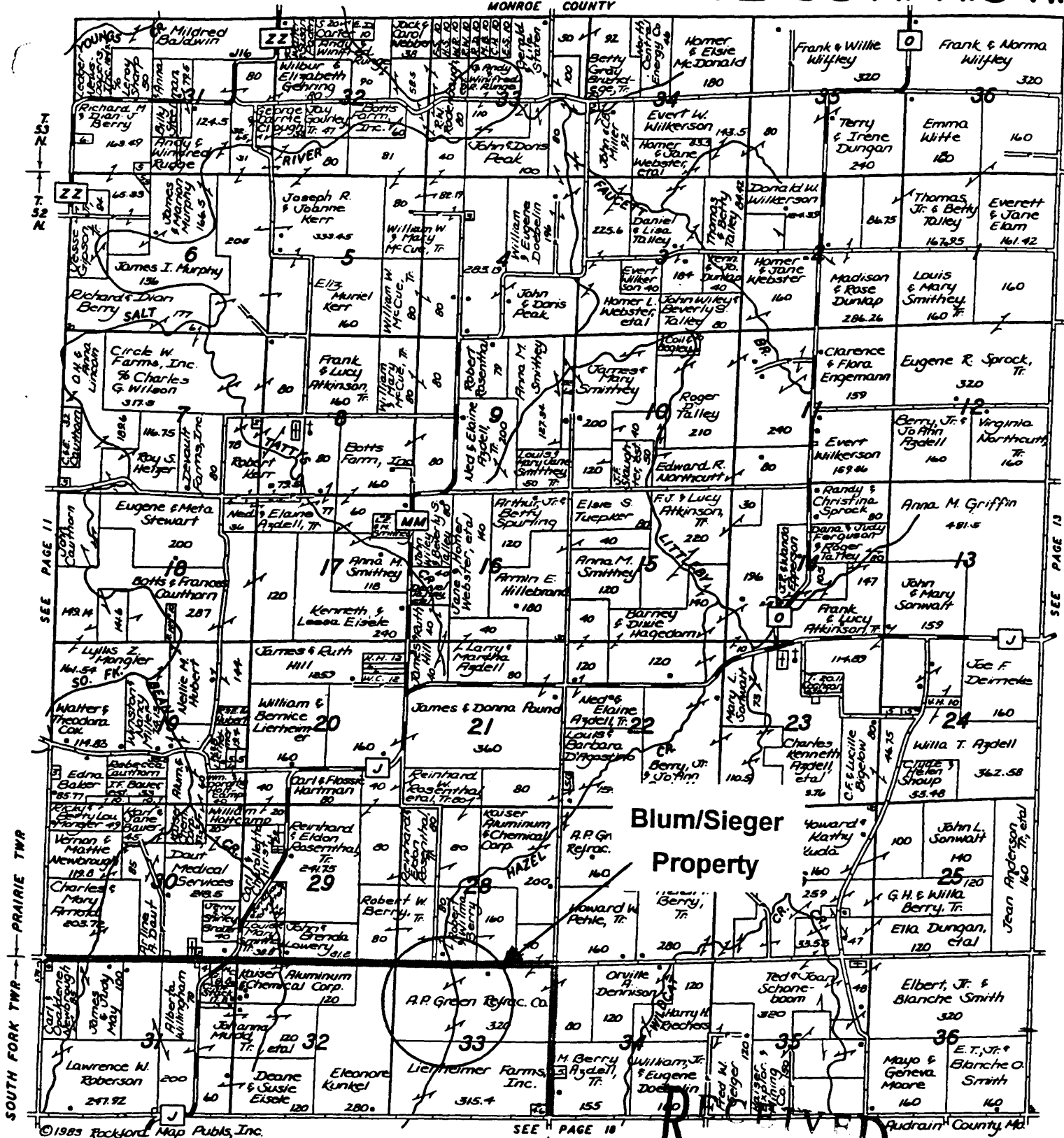


By my signature, I attest to the following:

1. All statements made on this Mine Plan Form are correct, complete, and true. to the best of my knowledge.
2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

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MAR 15 2000  
MISSOURI LAND  
RECLAMATION COMMISSION

SIGNATURE OF APPLICANT 		TITLE <i>Geologist</i>	
NOTARY PUBLIC EMBOSSEER SEAL	STATE <i>Missouri</i>		COUNTY (OR CITY OF ST. LOUIS) <i>Callaway</i>
	SUBSCRIBED AND SWORN BEFORE ME, THIS DAY OF <i>2/13/00</i> <i>2000</i>		USE RUBBER STAMP IN STAMP AREA BELOW <b>KAREN S. LUTHER</b>
	NOTARY PUBLIC SIGNATURE <i>Karen S. Luther</i>	MY COMMISSION EXPIRES <i>7/18/2003</i>	NOTARY PUBLIC STATE OF MISSOURI CALLAWAY COUNTY
	NOTARY PUBLIC NAME (TYPED OR PRINTED) <i>Karen S Luther</i>		MY COMMISSION EXPIRES JULY 18, 2003
APPROVED BY (DIRECTOR'S REPRESENTATIVE) 		DATE APPROVED <i>6-1-00</i>	PERMIT NUMBER <i>0118</i>



RECEIVED  
MAR 15 2000

MISSOURI LAND

**CENTRAL MISSOURI**

**CENTRAL MISSOURI MARKET CENTER**

**PHONE: (314) 581-3192**

**P.O. Box 340 - Highway 54 East**

**Mexico, Missouri 65265**



A.P. Green Refractories, Inc.

P. O. Box 430, Fulton, Missouri 65251

Property:

Blum / Sieger

Project: Land Reclamation Permit

Final Land Use

Location: Sect. 33, T. 52 N., R. 8 W.

Audrain County

Designed by: DJK

Date: March 13, 2000

Impoundment

New Permit Boundary

Dam

Old Permit Boundary

Equipment Storage area

Hell road

Backfill area

37 Acres

Backfill area

Impoundment

Sieger Permit Boundary

20 Acres

Final land use legend

Wildlife

Agriculture

Development

Water Impoundment

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MAR 15 2000  
MISSOURI LAND  
RECLAMATION COMMISSION

MAGNETIC

1"=500'

N

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
SITE INFORMATION FORM

RECEIVED  
JUL 06 1999

P.O. BOX 176  
JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>Bueker</b>		MISSOURI LAND RECLAMATION COMMISSION		PERMIT NUMBER <b>118</b>
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>				
COUNTY <b>Gasconade</b>	1/4 SECTION <b>SW,SE,NE Sec. 25; SW,NW Sec. 30</b>		SECTION <b>25 and 30</b>	
TOWNSHIP <b>43 N</b>	RANGE <b>5 and 6 W</b>		ACRES <b>37</b>	
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)				
MINERAL COMMODITY <b>Fire Clay</b>			ESTIMATED TONS/YEAR (FOR GRAVEL SITES)	
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>A.P. Green Refractories, Inc.</b>				
ADDRESS <b>P. O. Box 430</b>				
CITY <b>Fulton</b>	STATE <b>MO</b>		ZIP CODE <b>65251</b>	
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):			DATE OF AGREEMENT  <input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT	
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc.</b>				
ADDRESS <b>P.O. Box 430</b>				
CITY <b>Fulton</b>	STATE <b>Missouri</b>		ZIP CODE <b>65251</b>	
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input type="checkbox"/> MINERAL DEED <input checked="" type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):			DATE OF AGREEMENT  <input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT  <b>04/28/77</b>	
NOTE: Each site must be shown on a map and be included in a public notice and an approved mine plan.				

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

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TYPE OF PLAN (CHECK ONE):

MISSOURI LAND  
RECLAMATION COMMISSION

☐ SHORT TERM, FOR ONE PERMIT YEAR

☒ LONG TERM, FOR PERIOD THROUGH DATE: 12/31/2050

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY

This site includes multiple individual pits. Generally the soils are shallow and rocky. Topsoil is generally less than 6 inches deep. Vegetation is either hardwood timber or open with annual weedy species. Slopes vary depending on specific location but generally are between 0 and 10 %.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

B. SPOIL

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

Spoil is stockpiled in a previously mined out pit or stockpiled adjacent to the current pit where it is pushed back into the excavation following mining or used as fill in constructing a dam for the final impoundment. All spoil will be covered with water or topsoil.

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MISSOURI LAND  
RECLAMATION COMMISSION

C. ACID MATERIALS

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

(See site maps)

YES

NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☒☐

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

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JUL 16 1999

## A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1

Mixture #1

PURPOSE OR LAND USE

Wildlife

MISSOURI LAND  
RECLAMATION COMMISSION

B. SEEDING OR PLANTING TIME

Fall

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchardgrass	10		
Timothy	10		
Red Clover	5		
Korean Lespedeza	5		
Wheat or Oats	30		
Serecea Lespedeza (on slopes)	10		

VEGETATION MIX #2

Mixture #2

PURPOSE OR LAND USE

Wildlife

B. SEEDING OR PLANTING TIME

Spring

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchard Grass	10		
Korean Lespedeza	6		
Wheat or Oats	30		
Serecea Lespedeza (On Slopes)	20		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. Small impoundments or graded backfill areas will be left by the final phases of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. A more detailed reclamation plan for each individual pit is included on attachment A.

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RECLAMATION COMMISSION

**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will be graded within one year of the expiration of the permit during which the disturbance occurred.

**REPLACEMENT OF TOPSOIL**

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

**REVEGETATION**

The site will be seeded in the fall or spring after topsoil replacement.

**AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)****-12"****D. USE OF LAND WHEN RECLAIMED***Estimate acreage of each land use below, after reclamation:***ESTIMATED ACRES:****Wildlife (forest or other habitat with livestock excluded)****19****Agricultural (pasture, cropland, and horticultural)****0****Development (residential, industrial, and recreational)****0****Water impoundments (for wildlife, agricultural, or development)****18**



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RECLAMATION COMMISSION

Page 4 Section B "Grading" - Describe Proposed Reclamation topography; including slopes

Pit #1A & Pit #1B. Both of these pits will be inundated with water. We have built a dam with the overburden and spoil from pit # 1B. The water backed up by dam will cover both of these pits. Spoil and overburden was also used to partially backfill the west side of pit #1B. Slopes are less than 5 % except on dam slopes.

Pit #2, is a prelaw pit mined prior to 1972. We plan to enlarge the pit and perform mining on three areas which will adjoin the present prelaw pit. The new disturbance will be both water impoundment and slopes.

Pit #3, was a prelaw pit that we went deeper in. We performed some grading and seeding on the Southwest slope of the impoundment. There is an office and parking lot belonging to Waste Management of North America, Inc. located North of the impoundment.

Pit #4, has been mined out and completely backfilled. The backfilled site was covered with topsoil and reseeded for wildlife. The site slopes less than 5%.

Pit #6, is currently being mined. The final reclamation will be an impoundment with a dam on the North side of the impoundment. Because the pit lays in a draw there will be slopes down to the water level that are reseeded with a wildlife seed mixture. Remaining slopes are anticipated to vary between 10 - 20%.

Pit #10, is mined out and reclaimed. There is a final impoundment and area reseed to grass. Slopes are less than 5% excluding the slopes of the dam located to the west of the impoundment.

Pit #13A, is mined out and reclaimed. This site consist of a water impoundment with a small dam along the West and Northwest sides of the impoundment. Slopes are less than 5% , excluding the dam slopes.

Pit #14, is mined out and reclaimed. The site consist of a water impoundment and a backfilled area that has been seeded to wildlife. The backfilled area (2 acres) has been approved and released by DNR. Water impoundment slopes are 3:1 or less.

Pit #15 and #15A, has been mined and reclaimed. The site was originally two separate pits but combined into one when mined. The final reclamation consist of and impoundment with a dam to the South and East sides of the impoundment. Seeded slopes are 10 - 20% in most locations.

Pit #16, is mined and reclaimed. The excavation was completely backfilled and reseeded with a wildlife seed mixture. Slopes are estimated to be approximately 15%.



Pit #19, is currently being mined. Final reclamation will consist of an impoundment and seeded slopes. Final slopes of 10 % or less are anticipated.

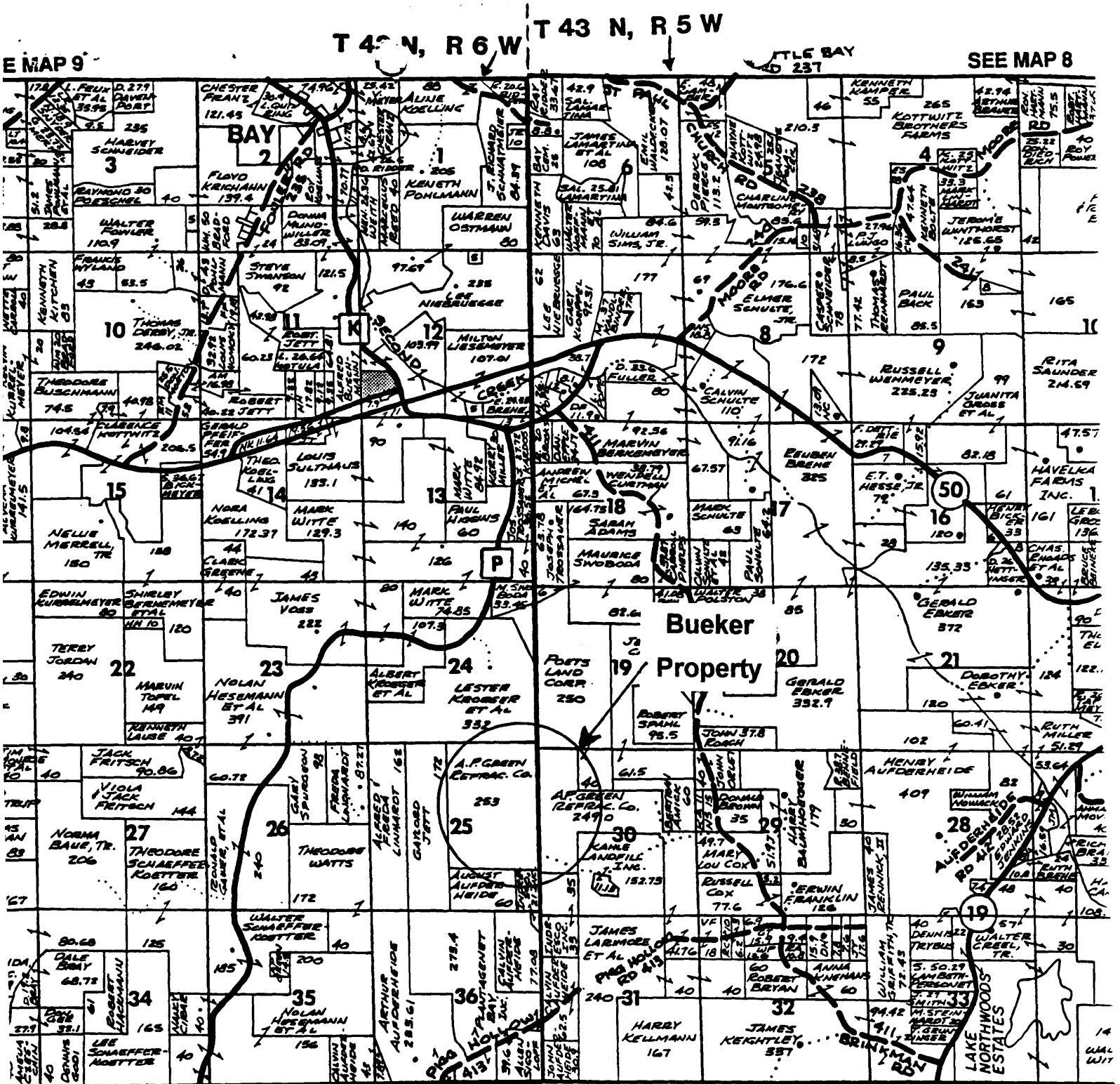
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AUG 11 1999

By my signature, I attest to the following:

MISSOURI LAND  
RECLAMATION COMMISSION

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

SIGNATURE OF APPLICANT 		TITLE Mining Supervisor - Western District Mines	
NOTARY PUBLIC EMBOSSER SEAL	STATE Missouri		COUNTY (OR CITY OF ST. LOUIS) Callaway
	SUBSCRIBED AND SWORN BEFORE ME, THIS 10th DAY OF August 19 99		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE 	MY COMMISSION EXPIRES 7/18/2003	KAREN S. LUTHER NOTARY PUBLIC STATE OF MISSOURI CALLAWAY COUNTY MY COMMISSION EXPIRES JULY 18, 2003
	NOTARY PUBLIC NAME (TYPED OR PRINTED) Karen S. Luther		
APPROVED BY (DIRECTOR'S REPRESENTATIVE)		DATE APPROVED	PERMIT NUMBER



BETTER STORE INC.  
ERLING OIL CO.

G, MISSOURI 65062  
ARM SUPPLIES SINCE 1893  
3-6321 or 943-6393



Lubricants

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MISSOURI LAND  
RECLAMATION COMMISSION

MAP 11

MAP 10

PG. 11 PG. 11

# A.P. Green Refractories, Inc.

P. O. Box 430, Fulton, Missouri 65251

Property:

Bueker Property

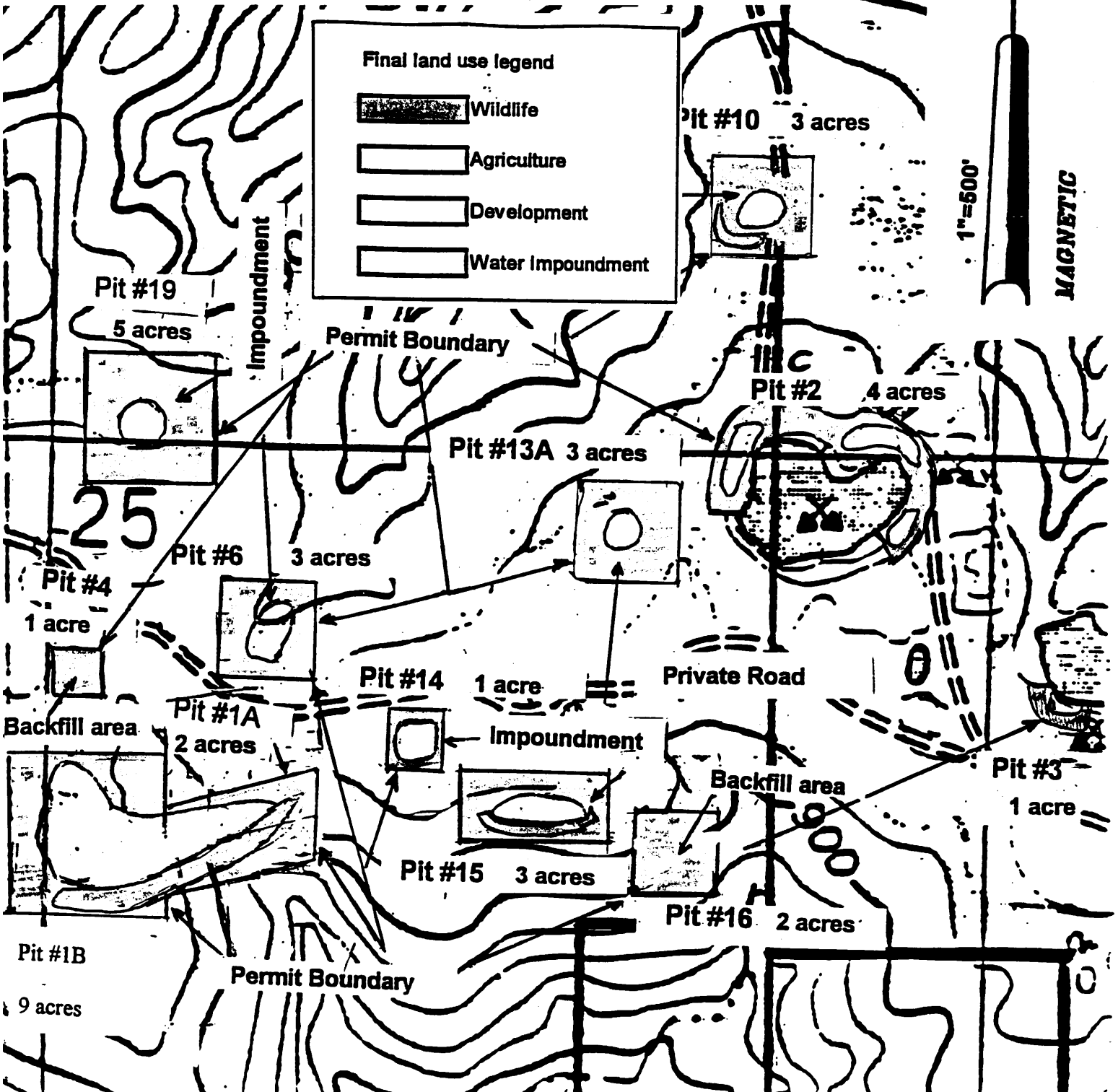
Project: Land Reclamation Permit  
Final Land Use

Location: Sect. 25 & 30. T. 43 N., R. 5 & 6 W.  
Gasconade County, Missouri

Designed by: DJK

Date: June 30, 1999

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RECLAMATION COMMISSION



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

SITE INFORMATION FORM

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JUL 6 1999

P.O. BOX 176  
JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>Chicago-Retort</b>		MISSOURI LAND RECLAMATION COMMISSION		PERMIT NUMBER <b>118</b>
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>				
COUNTY <b>Montgomery</b>	1/4 SECTION <b>SE 1/4</b>		SECTION <b>6</b>	
TOWNSHIP <b>47 N</b>	RANGE <b>4 W</b>		ACRES <b>5</b>	
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)				
MINERAL COMMODITY <b>Fire Clay</b>			ESTIMATED TONS/YEAR (FOR GRAVEL SITES)	
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>A. P. Green Industries, Inc.</b>				
ADDRESS <b>P. O. Box 430</b>				
CITY <b>Fulton</b>	STATE <b>MO</b>		ZIP CODE <b>65251</b>	
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____			<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT  DATE OF AGREEMENT	
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc.</b>				
ADDRESS <b>P.O. Box 430</b>				
CITY <b>Fulton</b>	STATE <b>Missouri</b>		ZIP CODE <b>65251</b>	
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input type="checkbox"/> MINERAL DEED <input checked="" type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____			<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT  DATE OF AGREEMENT  <b>05/30/73</b>	
NOTE: Each site must be shown on a map and be included in a public notice and an approved mine plan.				

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

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TYPE OF PLAN (CHECK ONE):

- ☐ SHORT TERM, FOR ONE PERMIT YEAR
- ☒ LONG TERM, FOR PERIOD THROUGH DATE: **12/31/2050**

MISSOURI LAND  
RECLAMATION COMMISSION

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY.

This site is covered with deciduous hardwoods. Soils are thin and rocky. Slopes vary with most greater than 5%. The slopes on the East side of the permit exceed 15%.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

## B. SPOIL

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

We are currently mining this site. Spoil is placed in a previous mining phase and will be covered by the final impoundment.

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MISSOURI LAND  
RECLAMATION COMMISSION

## C. ACID MATERIALS

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

## PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

(See site maps)

YES

NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐☒

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

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## A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
Mixture #1	Wildlife	Fall

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchardgrass	10		
Timothy	10		
Red Clover	5		
Korean Lespedeza	5		
Wheat or Oats	30		
Serecea Lespedeza (on slopes)	10		

VEGETATION MIX #2	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
Mixture #2	Wildlife	Spring

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchard Grass	10		
Korean Lespedeza	6		
Wheat or Oats	30		
Serecea Lespedeza (On Slopes)	20		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.



**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

**RECEIVED**  
JUL 06 1999  
MISSOURI AND  
RECLAMATION  
COMMISSION

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will be graded within one year of the expiration of the permit during which the disturbance occurred.

**REPLACEMENT OF TOPSOIL**

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

**REVEGETATION**

The site will be seeded in the fall or spring after topsoil replacement.

**AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)****-12"****D. USE OF LAND WHEN RECLAIMED***Estimate acreage of each land use below, after reclamation:***ESTIMATED ACRES:**

Wildlife (forest or other habitat with livestock excluded)

3

Agricultural (pasture, cropland, and horticultural)

0

Development (residential, industrial, and recreational)

0

Water impoundments (for wildlife, agricultural, or development)



2

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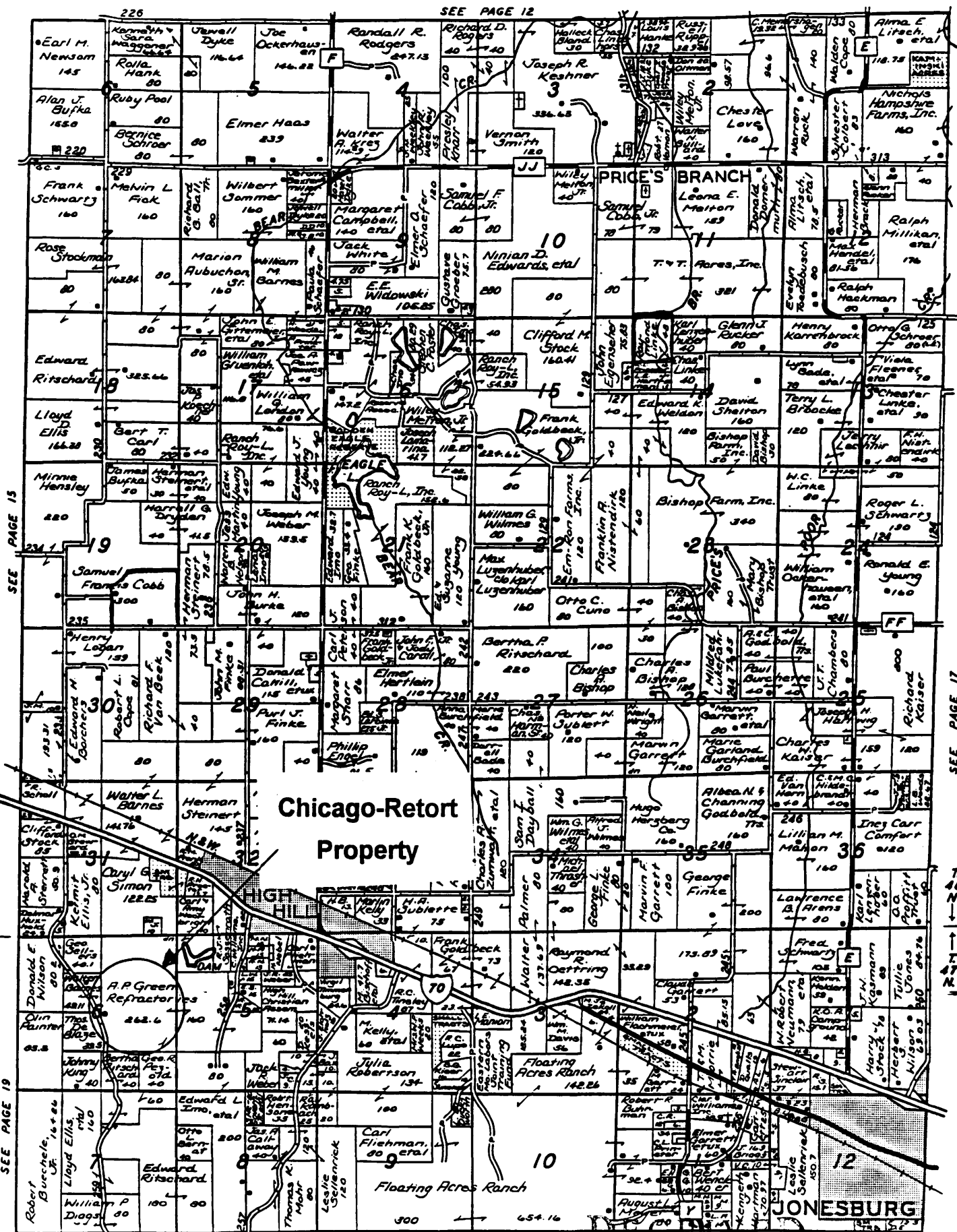
By my signature, I attest to the following:

MISSOURI LAND  
RECLAMATION COMMISSION

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

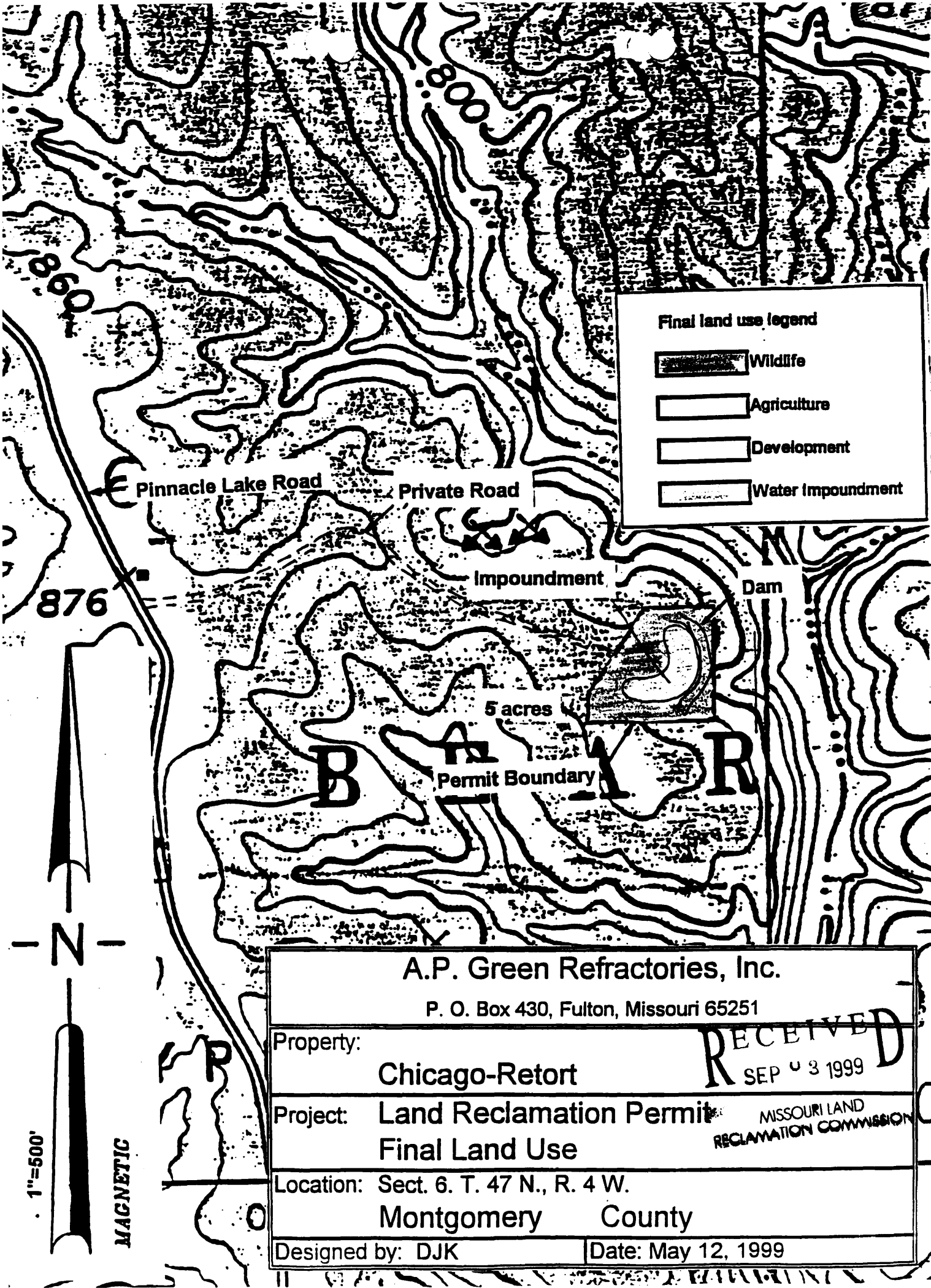
SIGNATURE OF APPLICANT 		TITLE Mining Supervisor - Western District Mines	
NOTARY PUBLIC EMBOSSER SEAL	STATE Missouri		COUNTY (OR CITY OF ST. LOUIS) Callaway
	SUBSCRIBED AND SWORN BEFORE ME, THIS 10th DAY OF August 19 99		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE 	MY COMMISSION EXPIRES 7/18/2003	KAREN S. LUTHER NOTARY PUBLIC STATE OF MISSOURI GALLAWAY COUNTY MY COMMISSION EXPIRES JULY 18, 2003
	NOTARY PUBLIC NAME (TYPED OR PRINTED) Karen S. Luther		
APPROVED BY (DIRECTOR'S REPRESENTATIVE)		DATE APPROVED	PERMIT NUMBER

SEE PAGE 12



SEE PAGE 19

SEE PAGE 17



Final land use legend

- Wildlife
- Agriculture
- Development
- Water Impoundment

Pinnacle Lake Road

Private Road

Impoundment

Dam

5 acres

Permit Boundary

A.P. Green Refractories, Inc.

P. O. Box 430, Fulton, Missouri 65251

Property:

Chicago-Retort

Project:

Land Reclamation Permit  
Final Land Use

Location: Sect. 6. T. 47 N., R. 4 W.

Montgomery County

Designed by: DJK

Date: May 12, 1999

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SEP 03 1999  
MISSOURI LAND  
RECLAMATION COMMISSION

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
SITE INFORMATION FORM

RECEIVED  
JUL 6 1999

P.O. BOX 176  
JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>Danuser Pit #1</b>		MISSOURI LAND RECLAMATION COMMISSION		PERMIT NUMBER <b>118</b>	
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>					
COUNTY <b>Maries</b>		1/4 SECTION <b>NE 1/4</b>		SECTION <b>21</b>	
TOWNSHIP <b>41 N</b>		RANGE <b>7 W</b>		ACRES <b>4</b>	
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)					
MINERAL COMMODITY <b>Fire Clay</b>				ESTIMATED TONS/YEAR (FOR GRAVEL SITES)	
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>Mr. and Mrs. Lee Maples</b>					
ADDRESS <b>P. O. Box 519</b>					
CITY <b>Belle</b>		STATE <b>MO</b>		ZIP CODE <b>65013</b>	
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____  <input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT				DATE OF AGREEMENT	
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc.</b>					
ADDRESS <b>P.O. Box 430</b>					
CITY <b>Fulton</b>		STATE <b>Missouri</b>		ZIP CODE <b>65251</b>	
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input checked="" type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____  <input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT				DATE OF AGREEMENT <b>04/06/48</b>	
NOTE: Each site must be shown on a map and be included in a public notice and an approved mine plan.					

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES



TYPE OF PLAN (CHECK ONE):

- ☐ SHORT TERM, FOR ONE PERMIT YEAR  
☒ LONG TERM, FOR PERIOD THROUGH DATE: 12/31/2050

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY.

Prior to permitting this site was vegetated to fescue and utilized for hay production. There is an area (1 acre) which contains an old clay mine which has timber dozed into it. Slopes are generally less than 5%.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

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SEP 4 2003

MISSOURI LAND  
RECLAMATION COMMISSION**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will be graded within one year of the expiration of the permit during which the disturbance occurred.

**REPLACEMENT OF TOPSOIL**

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

**REVEGETATION**

The site will be seeded in the fall or spring after topsoil replacement.

**AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)**

-12"

**D. USE OF LAND WHEN RECLAIMED***Estimate acreage of each land use below, after reclamation:***ESTIMATED ACRES:**

Wildlife (forest or other habitat with livestock excluded)

0

Agricultural (pasture, cropland, and horticultural)

4

Development (residential, industrial, and recreational)

0

Water impoundments (for wildlife, agricultural, or development)

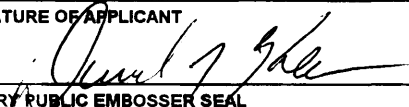

0

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AUG 11 1999

By my signature, I attest to the following:

MISSOURI LAND  
RECLAMATION COMMISSION

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

SIGNATURE OF APPLICANT  David J. Keller		TITLE Mining Supervisor - Western District Mines	
NOTARY PUBLIC EMBOSSEER SEAL	STATE Missouri		COUNTY (OR CITY OF ST. LOUIS) Callaway
	SUBSCRIBED AND SWORN BEFORE ME, THIS 10th DAY OF August 19 99		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE 	MY COMMISSION EXPIRES 7/18/2003	KAREN S. LUTHER NOTARY PUBLIC STATE OF MISSOURI CALLAWAY COUNTY MY COMMISSION EXPIRES JULY 18, 2003
	NOTARY PUBLIC NAME (TYPED OR PRINTED) Karen S. Luther		
APPROVED BY (DIRECTOR'S REPRESENTATIVE)		DATE APPROVED	PERMIT NUMBER



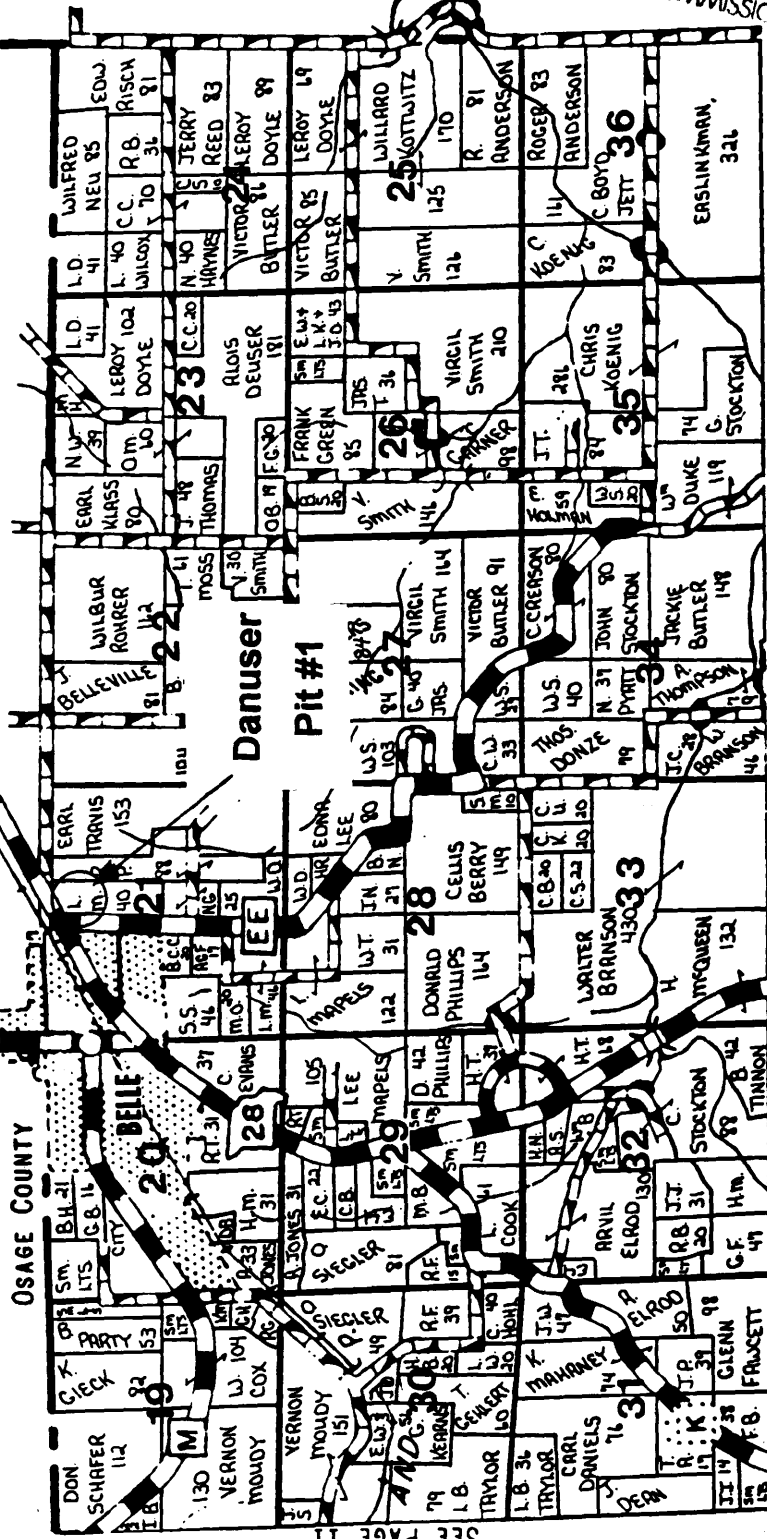
# WELCH REAL ESTATE



Office (314) 265 - 3831  
Home (314) 699 - 4229

**Hwy. 68 North  
St. James, Mo.**

**TOWNSHIP 41 RANGE 7**



**ALL RIGHTS RESERVED**

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JUL 6 1999  
MISSOURI LAND  
RECLAMATION COMMISSION  
GASCONADE COUNTY

Claypit

Missouri Highway 28

1038

4 acres

County Road

RECEIVED

SEP 4 2003

MISSOURI LAND  
RECLAMATION COMMISSION

State Route EE

Permit Boundary

Final land use legend

- ☐ Wildlife
- ☐ Agriculture
- ☐ Development
- ☐ Water Impoundment

1042

1"=500'

MAGNETIC

A.P. Green Refractories, Inc.

P. O. Box 430, Fulton, Missouri 65251

Property:

Danuser

Project: Land Reclamation Permit  
Final Land Use

Location: Sect. 23. T. 41 N., R. 7 W.

Maries

County

Designed by: DJK

Date: Sept. 2, 2003

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
SITE INFORMATION FORM

RECEIVED  
JUL 6 1999

P.O. BOX 176  
JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>Farnberg-Larimore</b>		PERMIT NUMBER <b>118</b>	
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>			
COUNTY <b>Gasconade</b>	1/4 SECTION <b>SW 1/4 of 30, NW 1/4 of 31</b>		SECTION <b>30 and 31</b>
TOWNSHIP <b>43 N</b>	RANGE <b>5 W</b>		ACRES <b>6</b>
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)			
MINERAL COMMODITY <b>Fire Clay</b>		ESTIMATED TONS/YEAR (FOR GRAVEL SITES)	
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>Waste Management of North America, Inc. (see attached)</b>			
ADDRESS <b>Two Westbrook Corporate Center, Suite 1000, P. O. Box 7070</b>			
CITY <b>Westchester</b>	STATE <b>IL</b>		ZIP CODE <b>60154</b>
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____  <input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT			DATE OF AGREEMENT
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc. (see attached)</b>			
ADDRESS <b>P. O. Box 430</b>			
CITY <b>Fulton</b>	STATE <b>MO</b>		ZIP CODE <b>65251</b>
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input checked="" type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____  <input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT			DATE OF AGREEMENT <b>03/21/89</b>
NOTE: Each site must be shown on a map and be included in a public notice and an approved mine plan.			

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JUL 06 1999  
MISSOURI LAND  
RECLAMATION COMMISSION

**Additional Landowner on Farnberg-Larimore Property  
Located in the NW1/4 of Sect 31. T. 43 N., R. 5 W.**

**Landowner:**

James and Jerry Lairmore  
112 East Lincoln Ave.  
Owensville, MO 65066

**Right to Mine:** Mineral Lease Dated: July 15, 1993

**Lease Holder:** Jones and Turner, Inc.  
P. O. Box 1127  
Linn, MO 65051

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

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AUG 11 1999

TYPE OF PLAN (CHECK ONE):

☐ SHORT TERM, FOR ONE PERMIT YEAR

☒ LONG TERM, FOR PERIOD THROUGH DATE: 12/31/2050

MISSOURI LAND  
RECLAMATION COMMISSION

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY.

Prior to permitting, site was a covered with deciduous hardwood. Soils were clay based and topsoil contained chert rock and sandstone. Slopes were generally 5 - 10%.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

Less than 12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Bulldozers and/or rubber tired scrapers were used to remove and store surficial material and soil.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and seeded if necessary to control erosion.

## B. SPOIL

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

Spoil was placed in stockpiles. Spoil will be either spread to a gently rolling topography, placed in the excavation or used as fill material to construct a dam to the west of the pit.

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MISSOURI LAND  
RECLAMATION COMMISSION

## C. ACID MATERIALS

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

## PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

(See site maps)

YES

NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐☒

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

## A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1	PURPOSE OR LAND USE	B. SEEDING OR PLANT TIME
Mixture #1	Wildlife	Spring or Fall

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Conventional agricultural equipment was used to prepare the seed bed. Fertilizer and seed were mixed together and broadcast on the seeding areas. A harrow or similar farm implement will be used to work the mixture into the seed bed.

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MISSOURI LAND  
RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchardgrass	10		
Timothy	10		
Red Clover	5		
Korean Lespedeza	5		
Wheat or Oats	30		
Serecea Lespedeza (on slopes)	10		

VEGETATION MIX #2	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
Mixture #2	Wildlife	Spring

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchard Grass	10		
Korean Lespedeza	6		
Wheat or Oats	30		
Serecea Lespedeza (On Slopes)	20		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

**B. GRADING**

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

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JUL 6 1999  
MISSOURI LAND  
RECLAMATION COMMISSION

Reclaimed topography will be gently rolling to rolling with a slope of 20% or less. There will be one water impoundments left on the property. Any timber removed during the mining process will be neatly piled for wildlife habitat.

**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be preformed after the completion of all mining operations and before the fall planting season.

**REPLACEMENT OF TOPSOIL**

Immediately following grading, weather permitting.

**REVEGETATION**

Primary seeding performed August 15 to September 15, weather permitting. Overseeding will be performed January 1 to March 31. Limited spring seed ing will be made if needed.

AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)

Less than 12"

**D. USE OF LAND WHEN RECLAIMED***Estimate acreage of each land use below, after reclamation:***ESTIMATED ACRES:**

Wildlife (forest or other habitat with livestock excluded)

3

Agricultural (pasture, cropland, and horticultural)

0

Development (residential, industrial, and recreational)

0

Water impoundments (for wildlife, agricultural, or development)

3

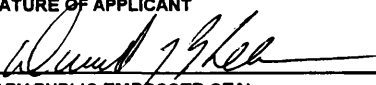



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AUG 11 1999

By my signature, I attest to the following:

MISSOURI LAND  
RECLAMATION COMMISSION

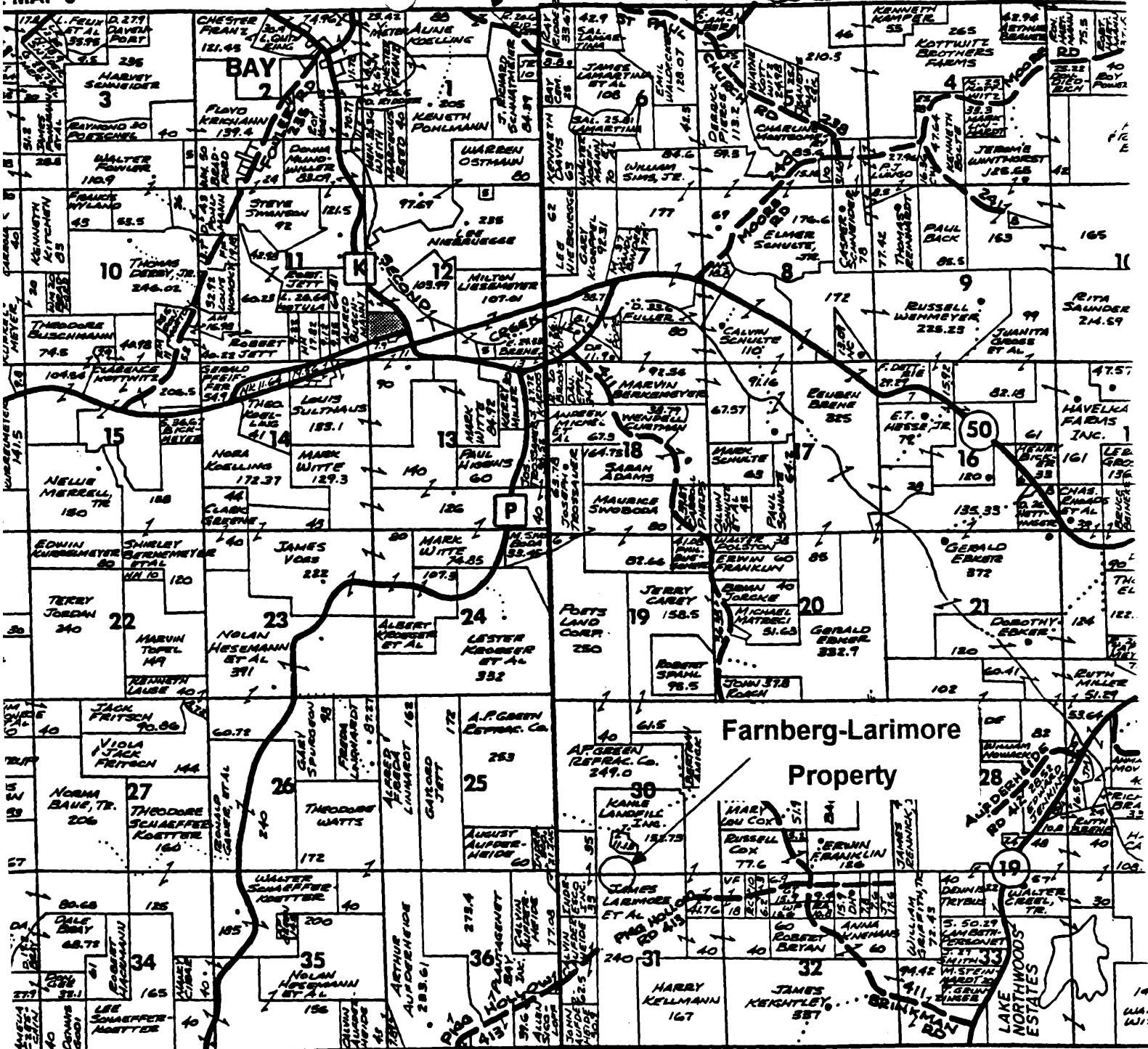
1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

SIGNATURE OF APPLICANT 		TITLE Mining Supervisor - Western District Mines	
NOTARY PUBLIC EMBOSSEER SEAL	STATE Missouri		COUNTY (OR CITY OF ST. LOUIS) Callaway
	SUBSCRIBED AND SWORN BEFORE ME, THIS 10th DAY OF August 19 99		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE 	MY COMMISSION EXPIRES 7/18/2003	NOTARY PUBLIC STATE OF MISSOURI CALLAWAY COUNTY MY COMMISSION EXPIRES JULY 18, 2003
	NOTARY PUBLIC NAME (TYPED OR PRINTED) Karen S. Luther		
APPROVED BY (DIRECTOR'S REPRESENTATIVE)		DATE APPROVED	PERMIT NUMBER

T 43 N, R 6 W T 43 N, R 5 W

MAP 9

SEE MAP 8



IP 15

© 1973 MSS

SEE MAP 14

ATTER STORE INC.  
ERLING OIL CO.



Lubricants

G, MISSOURI 65062

ARM SUPPLIES SINCE 1893

6321 or 943-6393

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JUL 6 1999

MISSOURI LAND  
RECLAMATION COMMISSION

MAP 11

MAP 10

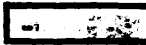


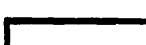
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AUG 11 1999

MISSOURI LAND  
RECLAMATION COMMISSION

**Final land use legend**

-  Wildlife
-  Agriculture
-  Development
-  Water Impoundment

938

Private road

6 Acres

Dam

Permit Boundary

Impoundment

1"=500'

MAGNETIC

**A.P. Green Refractories, Inc.**

P. O. Box 430, Fulton, Missouri 65251

Property:

**Farnberg-Larimore Property**

Project: **Land Reclamation Permit**

**Final Land Use**

Location: **Sects. 30&31. T. 43 N., R. 5 W.**

**Gasconade County, Missouri**

Designed by: **DJK**

Date: **April 29, 1999**

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
SITE INFORMATION FORM

RECEIVED  
JUL 06 1999

P.O. BOX 176  
JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>Hance #1 &amp; #2</b>		MISSOURI LAND RECLAMATION COMMISSION		PERMIT NUMBER <b>118</b>
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>				
COUNTY <b>Phelps</b>	1/4 SECTION <b>NW &amp; NE 1/4</b>		SECTION <b>8</b>	
TOWNSHIP <b>38 N</b>	RANGE <b>7 W</b>		ACRES <b>5</b>	
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)				
MINERAL COMMODITY <b>Fire Clay</b>			ESTIMATED TONS/YEAR (FOR GRAVEL SITES)	
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>Charles E. Herrman, Jr.</b>				
ADDRESS <b>117 West Eighth Street</b>				
CITY <b>Rolla</b>	STATE <b>MO</b>		ZIP CODE <b>65401</b>	
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____			<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT  DATE OF AGREEMENT	
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc.</b>				
ADDRESS <b>P.O. Box 430</b>				
CITY <b>Fulton</b>	STATE <b>Missouri</b>		ZIP CODE <b>65251</b>	
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input checked="" type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____			<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT  DATE OF AGREEMENT  <b>05/30/73</b>	
NOTE: Each site must be shown on a map and be included in a public notice and an approved mine plan.				

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

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MISSOURI LAND  
RECLAMATION COMMISSION

TYPE OF PLAN (CHECK ONE):

- ☐ SHORT TERM, FOR ONE PERMIT YEAR  
☒ LONG TERM, FOR PERIOD THROUGH DATE: 12/10/2010

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY.

This site prior to mining was open pasture with very little rocky residual topsoil. Slopes were gentle to moderate with a fescue/clover cover.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

**B. SPOIL**

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

Spoil was moved using bulldozers and rubber tired scrapers. The spoil was either used to construct the two dams on the site or backfilled into the excavation. A large pre-law spoil pile was used to backfill the west side of the east pit.

**RECEIVED**  
JUL 6 1999MISSOURI LAND  
RECLAMATION COMMISSION**C. ACID MATERIALS**

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

**PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)**

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

(See site maps)

YES

NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐☒

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

## RECLAMATION PLAN - 10 CSR 40-10.02 (D)2.

## A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1	PURPOSE OR LAND USE	B. SEEDING OR PLANT TIME
Mixture #1	Pasture	Fall

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

**RECEIVED**  
JUL 6 1999  
MISSOURI LAND  
RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Tall Fescue Red Clover Wheat or Oats	25 5 30		

VEGETATION MIX #2	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
Mixture #2	Pasture	Spring

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchard Grass Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes)	10 6 30 20		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. Two impoundment will be left by the final phase of mining. The impoundments will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

**RECEIVED**  
JUL 06 1999

MISSOURI LAND  
RECLAMATION COMMISSION

**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will be graded within one year of the expiration of the permit during which the disturbance occurred.

**REPLACEMENT OF TOPSOIL**

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

**REVEGETATION**

The site will be seeded in the fall or spring after topsoil replacement.

**AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)** -12"

**D. USE OF LAND WHEN RECLAIMED**

*Estimate acreage of each land use below, after reclamation:*

**ESTIMATED ACRES:**

Wildlife (forest or other habitat with livestock excluded)

0

Agricultural (pasture, cropland, and horticultural)

3

Development (residential, industrial, and recreational)

0

Water impoundments (for wildlife, agricultural, or development)


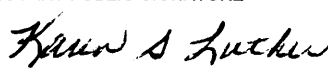
2



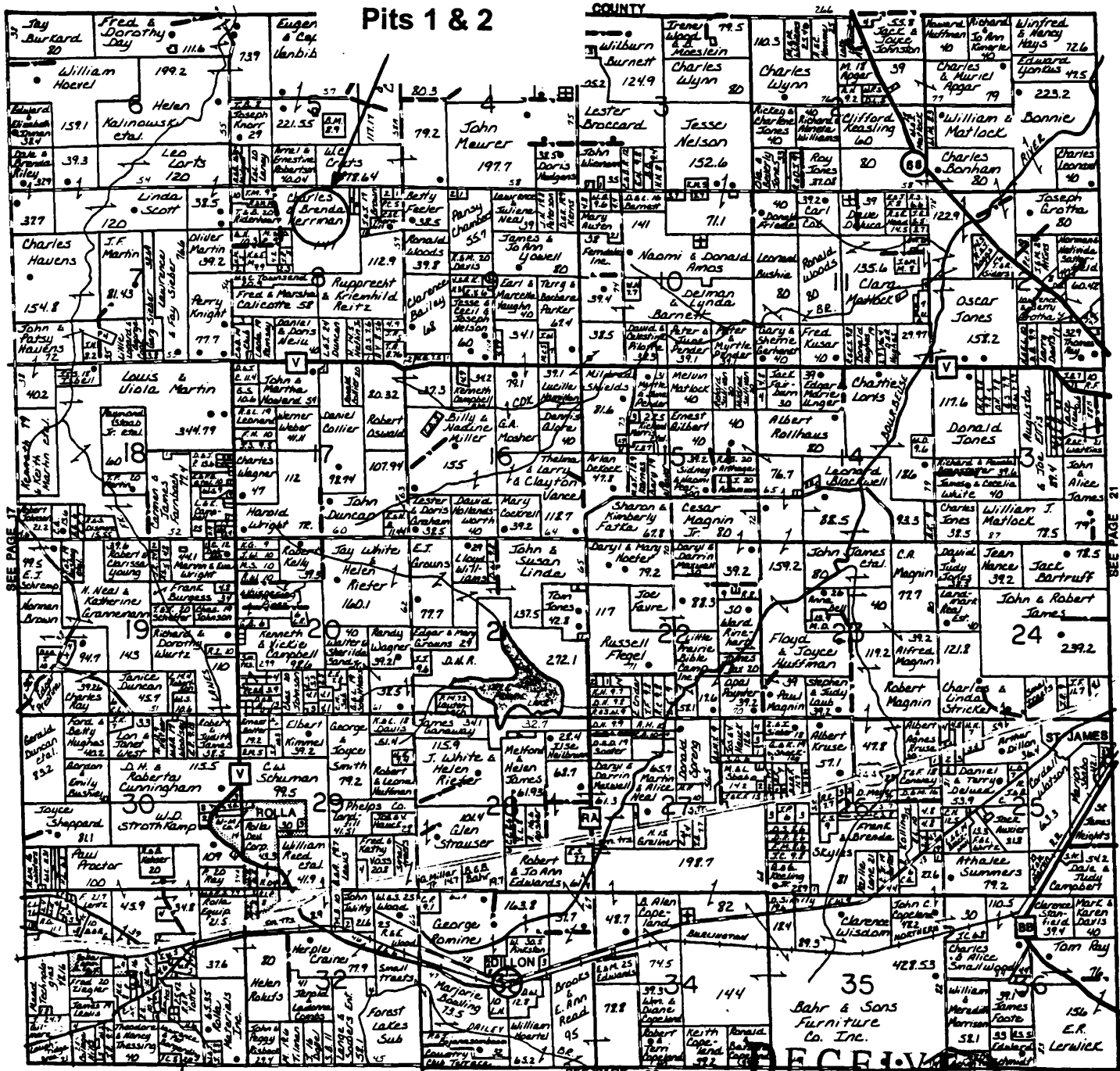
By my signature, I attest to the following:

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

**RECEIVED**  
AUG 11 1999  
MISSOURI LAND  
RECLAMATION COMMISSION

SIGNATURE OF APPLICANT 		TITLE Mining Supervisor - Western District Mines	
NOTARY PUBLIC EMBOSSEER SEAL	STATE Missouri		COUNTY (OR CITY OF ST. LOUIS) Callaway
	SUBSCRIBED AND SWORN BEFORE ME, THIS 10th DAY OF August 19 99		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE 	MY COMMISSION EXPIRES 7/18/2003	<b>KAREN S. LUTHER</b> NOTARY PUBLIC STATE OF MISSOURI CALLAWAY COUNTY MY COMMISSION EXPIRES JULY 18, 2003
	NOTARY PUBLIC NAME (TYPED OR PRINTED) Karen S. Luther		
APPROVED BY (DIRECTOR'S REPRESENTATIVE)		DATE APPROVED	PERMIT NUMBER

## Pits 1 & 2



JUL 06 1999

MISSOURI LAND

## BARNES TRUCK PLAZA

1-44 East & V Highway  
Rolla, Missouri 65401

- \* Mini - Mart
- \* Mens & Womens  
Showers
- \* Restaurant
- \* Diesel Fuel
- \* Texaco

**MERL BARNES** Phone: (314) 341 - 3565

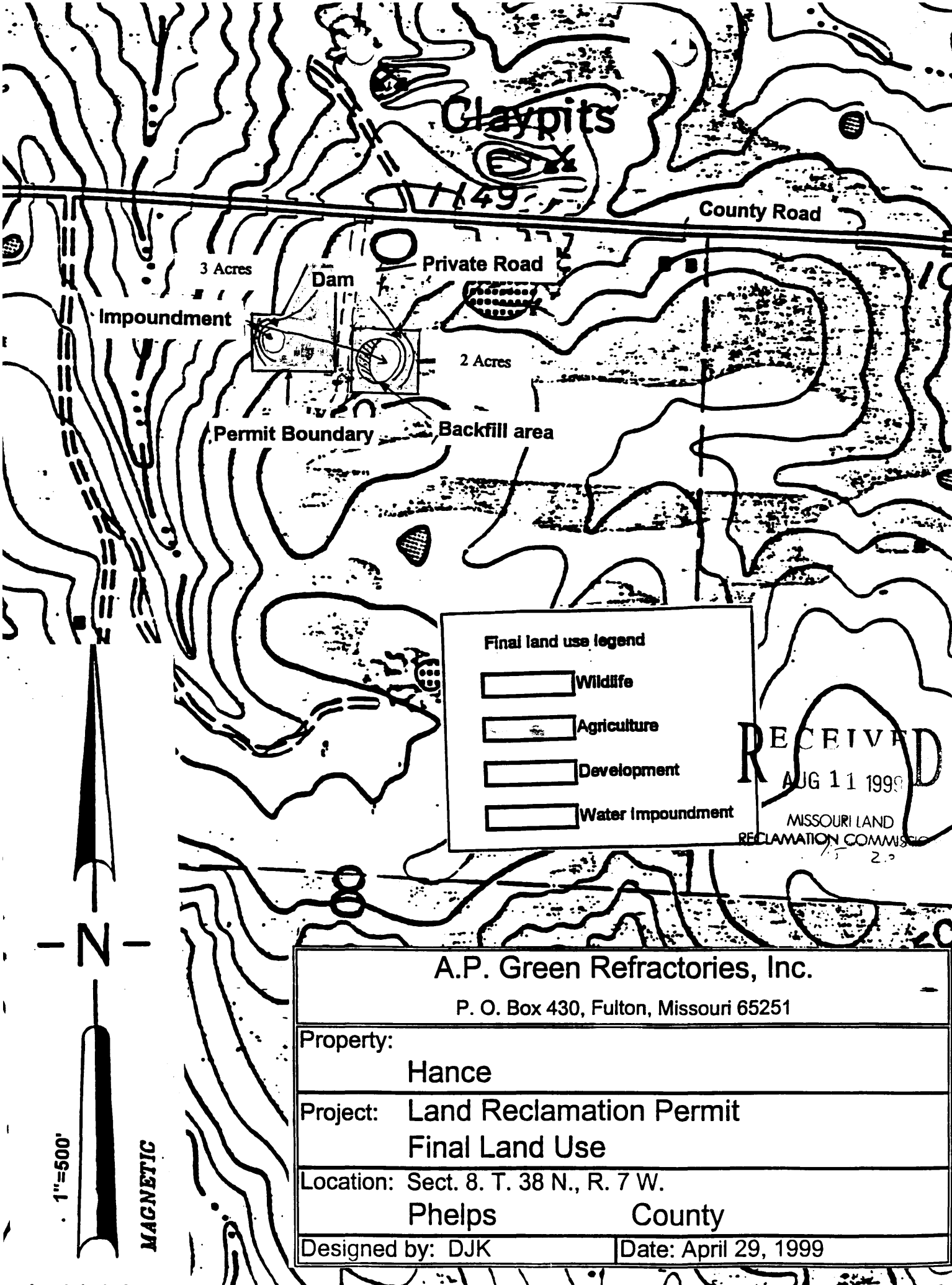
## AMERICAN FAMILY

**AUTO HOME BUSINESS HEALTH LIFE**

## HAROLD C. MACE



612 WEST 11TH STREET P.O. BOX 765  
ROLLA, MISSOURI 65401  
PHONE: OFF. 364 - 3528  
RES. 364-1959



Claypits

County Road

3 Acres

Dam

Private Road

Impoundment

2 Acres

Permit Boundary

Backfill area

Final land use legend

- ☐ Wildlife
- ☐ Agriculture
- ☐ Development
- ☐ Water Impoundment

RECEIVED  
AUG 11 1999

MISSOURI LAND  
RECLAMATION COMMISSION

A.P. Green Refractories, Inc.

P. O. Box 430, Fulton, Missouri 65251

Property:

Hance

Project: Land Reclamation Permit

Final Land Use

Location: Sect. 8. T. 38 N., R. 7 W.

Phelps

County

Designed by: DJK

Date: April 29, 1999

1"=500'

MAGNETIC

## MISSOURI DEPARTMENT OF NATURAL RESOURCES

RECEIVED

## LAND RECLAMATION COMMISSION

## SITE INFORMATION FORM

JAN 24 2007

P.O. BOX 176

JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>Harrison, S. S. Property</b>		MISSOURI LAND RECLAMATION COMMISSION PERMIT NUMBER <b>118</b>	
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>			
COUNTY <b>Callaway</b>	1/4 SECTION <b>SW 1/4</b>		SECTION <b>1</b>
TOWNSHIP <b>48 N</b>	RANGE <b>9 W</b>		ACRES <b>25</b>
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)			
MINERAL COMMODITY <b>Fire Clay</b>		ESTIMATED TONS/YEAR (FOR GRAVEL SITES)	
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>A. P. Green Industries, Inc.</b>			
ADDRESS <b>P. O. Box 430</b>			
CITY <b>Fulton</b>	STATE <b>MO</b>		ZIP CODE <b>65251</b>
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):			DATE OF AGREEMENT   
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):			DATE OF AGREEMENT   
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc.</b>			
ADDRESS <b>P.O. Box 430</b>			
CITY <b>Fulton</b>	STATE <b>Missouri</b>		ZIP CODE <b>65251</b>
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input checked="" type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):			DATE OF AGREEMENT  <b>03/08/61</b>
NOTE: Each site must be shown on a map and be included in a public notice and an approved mine plan.			

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

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TYPE OF PLAN (CHECK ONE):

☐ SHORT TERM, FOR ONE PERMIT YEAR

☒ LONG TERM, FOR PERIOD THROUGH DATE: 12/31/2050

JAN 24 2001

MISSOURI LAND  
RECLAMATION  
SECTION

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY.

This site prior to mining was moderately to gently sloping topography with a patchwork of deciduous hardwood forest and grassy pasture. Topsoil in the area is generally fair on the hillsides to good on the hill tops.

OPERATION PLAN - TO CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

B. SPOIL

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

Spoil will be moved using rubber tired scrapers and bull dozers and placed in gently sloping piles, used as backfill for slopes or placed in dams to create impoundments.

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JAN 24 2001

MISSOURI LAND  
DEPARTMENT

C. ACID MATERIALS

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)

DESCRIBE LOCATION AND ORIENTATION OF PIT. IF NOT CLEAR ON SITE MAPS

(See site maps)

YES

NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐☒

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

## RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2.

### A. REVEGETATION (Attach additional sheets, if needed)

JAN 24 2001

REVEGETATION MIX #1	PURPOSE OR LAND USE	MISSOURI LAND RECLAMATION	B. SEEDING OR PLANT TIME
Mixture #1	Pasture		Fall

#### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Tall Fescue Red Clover Wheat or Oats	25 5 30		

VEGETATION MIX #2	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
Mixture #2	Pasture	Spring

#### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchard Grass Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes)	10 6 30 20		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

B. GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. Three impoundment will be left by the final phase of mining. The impoundments will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

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JAN 24 2001

C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

MISSOURI LAND RECLAMATION

GRADING

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will graded within one year of the expiration of the permit during which the disturbance occurred.

REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)

-12"

D. USE OF LAND WHEN RECLAIMED

Estimate acreage of each land use below, after reclamation:

ESTIMATED ACRES:

Wildlife (forest or other habitat with livestock excluded)

0

Agricultural (pasture, cropland, and horticultural)

14

Development (residential, industrial, and recreational)

0

Water impoundments (for wildlife, agricultural, or development)

11



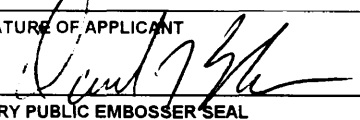
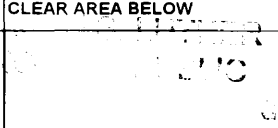

RECEIVED

JAN 24 2001

MISSOURI LAND  
RECLAMATION COMMISSION

By my signature, I attest to the following:

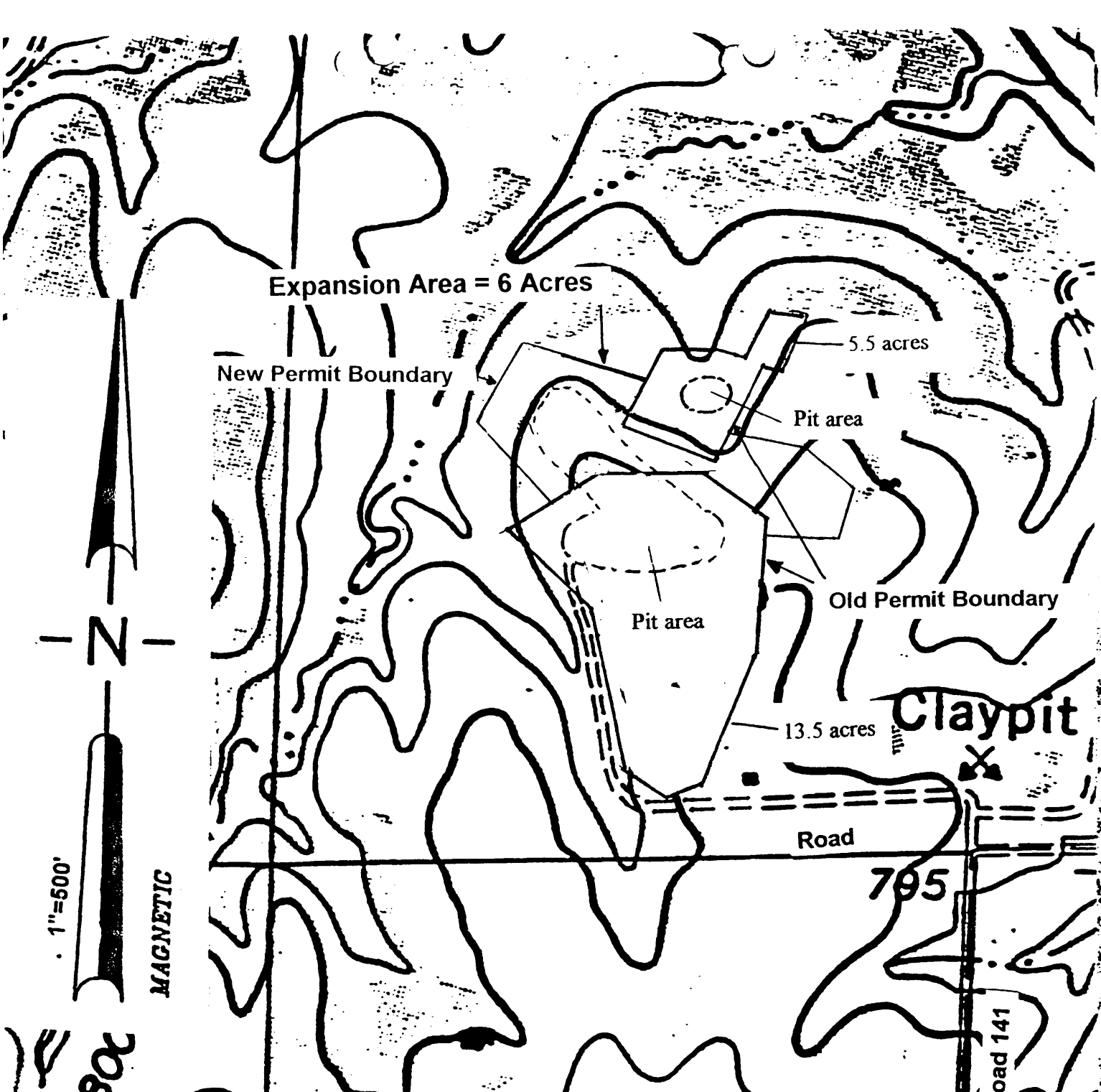
1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

SIGNATURE OF APPLICANT 		TITLE <i>Geologist</i>	
NOTARY PUBLIC EMBOSSEER SEAL	STATE <i>Missouri</i>		COUNTY (OR CITY OF ST. LOUIS)
	SUBSCRIBED AND SWORN BEFORE ME, THIS <i>23</i> DAY OF <i>January</i> 19 <i>01</i>		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE <i>Karen S. Luthick</i>	MY COMMISSION EXPIRES <i>7/18/2003</i>	
	NOTARY PUBLIC NAME (TYPED OR PRINTED) <i>Karen S. Luthick Karen S. Luthick</i>		
APPROVED BY (DIRECTOR'S REPRESENTATIVE) 		DATE APPROVED <i>2/18/01</i>	PERMIT NUMBER <i>0118</i>

**SE**

MISSOURI LAND

MISSOURI CASE  
DEC 11 1964



A.P. Green Refractories, Inc.	
P. O. Box 430, Fulton, Missouri 65251	
Property:	Harrison Property
Project:	Land Reclamation Permit Location Map
Location:	Sect. 1. T. 48 N., R. 9 W. Callaway County, Missouri
Designed by:	DJK
Date:	January 22, 2001

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MISSOURI LAND

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JAN 24 2001  
MISSOURI DEPT. OF REVENUE

Expansion Area = 6 Acres

New Permit Boundary

Impoundment

5.5 acres

Dam

Old Permit Boundary

13.5 acres

Claypit

Road

795

County Road 141

Final land use legend

Wildlife

Agriculture

Development

Water Impoundment

A.P. Green Refractories, Inc.

P. O. Box 430, Fulton, Missouri 65251

Property:

Harrison

Property

Project: Land Reclamation Permit

Final Land Use

Location: Sect. 1. T. 48 N., R. 9 W.

Callaway County, Missouri

Designed by: DJK

Date: January 22, 2001

1"=500'

MAGNETIC

800

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RESOURCES 6 1999  
MISSOURI LAND  
RECLAMATION COMMISSION

6 1999

MISSOURI LAND  
RECLAMATION COMMISSION

## SITE INFORMATION FORM

MO 780-1036 (12-91)

## PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES



## TYPE OF PLAN (CHECK ONE):

☐ SHORT TERM, FOR ONE PERMIT YEAR☒ LONG TERM, FOR PERIOD THROUGH DATE: 12/31/2050

## DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY

This site was relatively flat and was being use for commercial row crop farming. The site was bisected by a hedge row. Topsoil on the site is good.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

## AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

## IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

## DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

## DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

**B. SPOIL**

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

Spoil will be moved using rubber tired scrapers and bulldozers and placed in storage areas around the pit. After mining is completed the spoil will be either backfilled in the excavation or used to construct a small dam to the west of the pit.

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RECLAMATION COMMISSION

**C. ACID MATERIALS**

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

**PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)**

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

(See site maps)

YES

NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐☒

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

RECLAMATION PLAN - 10 CSR 40-10.0. (D)2.

A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1 <b>Mixture #1</b>	PURPOSE OR LAND USE <b>Agriculture</b>	B. SEEDING OR PLANT TIME <b>Fall</b>
--	---	---

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

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MISSOURI LAND  
RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Tall Fescue Red Clover Wheat or Oats	25 5 30		

VEGETATION MIX #2 <b>Mixture #2</b>	PURPOSE OR LAND USE <b>Row crop</b>	B. SEEDING OR PLANTING TIME <b>Spring</b>
--	--	--

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Generally tilled with typical agricultural farming equipment and planted or seed with equipment customarily used in row crop production.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Corn Grain Sorghum Wheat Soybeans	15 8 100 60		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.



**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

RECEIVED  
JUL 06 1999  
MISSOURI LAND  
RECLAMATION COMMISSION

**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will be graded within one year of the expiration of the permit during which the disturbance occurred.

**REPLACEMENT OF TOPSOIL**

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

**REVEGETATION**

The site will be seeded in the fall or spring after topsoil replacement.

**AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)****-12"****D. USE OF LAND WHEN RECLAIMED***Estimate acreage of each land use below, after reclamation:***ESTIMATED ACRES:**

Wildlife (forest or other habitat with livestock excluded)

0

Agricultural (pasture, cropland, and horticultural)

6

Development (residential, industrial, and recreational)

0

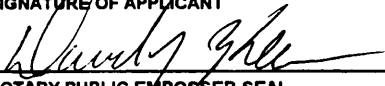

Water impoundments (for wildlife, agricultural, or development)

2

By my signature, I attest to the following:

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access. and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

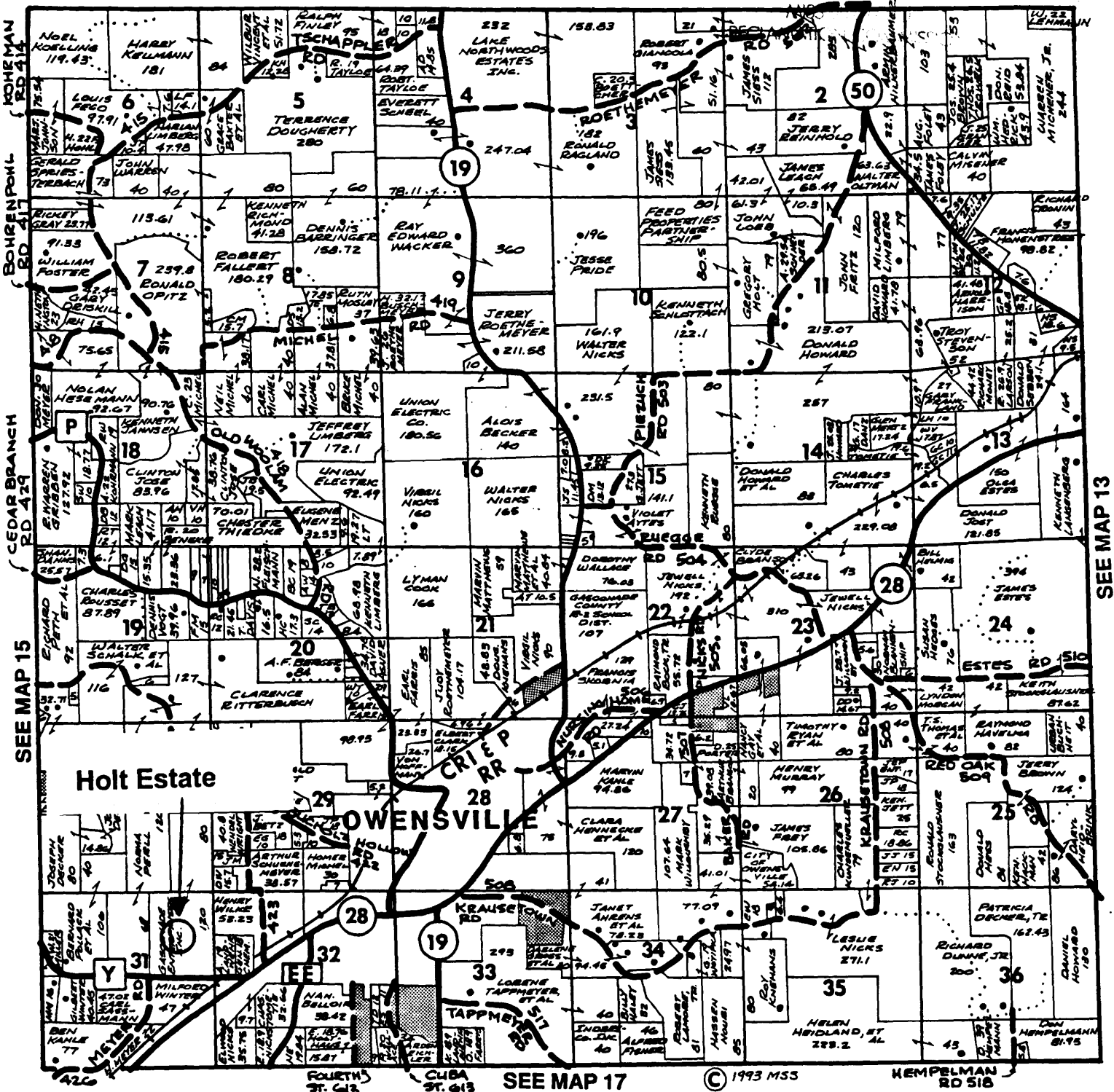
**RECEIVED**  
AUG 11 1999  
MISSOURI LAND  
RECLAMATION COMMISSION

SIGNATURE OF APPLICANT 		TITLE Mining Supervisor - Western District Mines	
NOTARY PUBLIC EMBOSSER SEAL	STATE Missouri		COUNTY (OR CITY OF ST. LOUIS) Callaway
	SUBSCRIBED AND SWORN BEFORE ME, THIS 10th DAY OF August 19 99		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE 	MY COMMISSION EXPIRES 7/18/2003	KAREN S. LUTHER NOTARY PUBLIC STATE OF MISSOURI CALLAWAY COUNTY MY COMMISSION EXPIRES JULY 18, 2003
	NOTARY PUBLIC NAME (TYPED OR PRINTED) Karen S. Luther		
APPROVED BY (DIRECTOR'S REPRESENTATIVE)		DATE APPROVED	PERMIT NUMBER

T 42 N, R 5 W

SEE MAP 11

RECEIVED JUL 6 1999



# MFA AGRI SERVICES

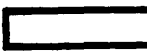



Feed, Seed, Fertilizer,  
Animal Health,  
& Farm Supplies

Route 2, Hwy. 28 West • Owensville, MO 65066 • Phone 437-2135

Fertilizer Plant 437-2138  
Allen Baumstark, General Manager

MAP 14

Final land use legend

-  Wildlife
-  Agriculture
-  Development
-  Water Impoundment

Private Road

Permit Boundary

8 Acres

Impoundment

Route Y

A.P. Green Refractories, Inc.

P. O. Box 430, Fulton, Missouri 65251

Property:

Holt Estate

Project: Land Reclamation Permit

Final Land Use

Location: Sect. 31. T. 42 N., R. 5 W.

Gasconade County

Designed by: DJK

Date: April 29, 1999

Missouri Highway 28

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SEP 03 1999

MISSOURI LAND  
RECLAMATION COMMISSION

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
SITE INFORMATION FORM

RECEIVED  
JUL 6 1999

P.O. BOX 176  
JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>Hummel</b>		MISSOURI LAND RECLAMATION COMMISSION	PERMIT NUMBER <b>118</b>
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>			
COUNTY <b>Warren</b>	1/4 SECTION <b>NE 1/4</b>		SECTION <b>34</b>
TOWNSHIP <b>47 N</b>	RANGE <b>2 W</b>		ACRES <b>3</b>
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)			
MINERAL COMMODITY <b>Fire Clay</b>			ESTIMATED TONS/YEAR (FOR GRAVEL SITES)
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>Geraldine H, Murphy et al.</b>			
ADDRESS <b>1002 S Water St.</b>			
CITY <b>Warrenton</b>	STATE <b>MO</b>		ZIP CODE <b>63383</b>
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____  <input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT			DATE OF AGREEMENT
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc.</b>			
ADDRESS <b>P.O. Box 430</b>			
CITY <b>Fulton</b>	STATE <b>Missouri</b>		ZIP CODE <b>65251</b>
SOURCE OF RIGHT TO MINE (CHECK ONE):  <input checked="" type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): _____  <input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT			DATE OF AGREEMENT <b>12/05/61</b>
NOTE: Each site must be shown on a map and be included in a public notice and an approved mine plan.			

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

TYPE OF PLAN (CHECK ONE):

☐ SHORT TERM, FOR ONE PERMIT YEAR

☒ LONG TERM, FOR PERIOD THROUGH DATE: 12/31/2007

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY.

This site is located in a pasture with slight to moderately sloping topography. A small clay pit existed to the east of the proposed deposit. Topsoil in the area was moderate to good quality.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

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MISSOURI LAND  
RECLAMATION COMMISSION

## B. SPOIL

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

Spoil will be placed on the perimeter of the pit to form a dam.

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RECLAMATION COMMISSION

## C. ACID MATERIALS

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

## PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

(See site maps)

YES

NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐☒

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

## A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1 Mixture #1	PURPOSE OR LAND USE Wildlife	B. SEEDING OR PLANTING TIME Fall
-----------------------------------	---------------------------------	-------------------------------------

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

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RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchardgrass	10		
Timothy	10		
Red Clover	5		
Korean Lespedeza	5		
Wheat or Oats	30		
Serecea Lespedeza (on slopes)	10		

VEGETATION MIX #2 Mixture #2	PURPOSE OR LAND USE Wildlife	B. SEEDING OR PLANTING TIME Spring
---------------------------------	---------------------------------	---------------------------------------

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchard Grass	10		
Korean Lespedeza	6		
Wheat or Oats	30		
Serecea Lespedeza (On Slopes)	20		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.



**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

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**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into a dam to create an impoundment. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will be graded within one year of the expiration of the permit during which the disturbance occurred.

**REPLACEMENT OF TOPSOIL**

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

**REVEGETATION**

The site will be seeded in the fall or spring after topsoil replacement.

**AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)**

-12"

**D. USE OF LAND WHEN RECLAIMED**

Estimate acreage of each land use below, after reclamation:

ESTIMATED ACRES:

Wildlife (forest or other habitat with livestock excluded)

2

Agricultural (pasture, cropland, and horticultural)

0

Development (residential, industrial, and recreational)

0

Water impoundments (for wildlife, agricultural, or development)


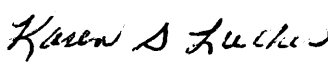
1

By my signature, I attest to the following:

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

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AUG 11 1999

MISSOURI LAND  
RECLAMATION COMMISSION

SIGNATURE OF APPLICANT 		TITLE Mining Supervisor - Western District Mines	
NOTARY PUBLIC EMBOSSEER SEAL	STATE Missouri		COUNTY (OR CITY OF ST. LOUIS) Callaway
	SUBSCRIBED AND SWORN BEFORE ME, THIS 10th DAY OF August 19 99		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE 	MY COMMISSION EXPIRES 7/18/2003	NOTARY PUBLIC STATE OF MISSOURI CALLAWAY COUNTY COMMISSION EXPIRES JULY 18, 2003
	NOTARY PUBLIC NAME (TYPED OR PRINTED) Karen S. Luther		
APPROVED BY (DIRECTOR'S REPRESENTATIVE)		DATE APPROVED	PERMIT NUMBER

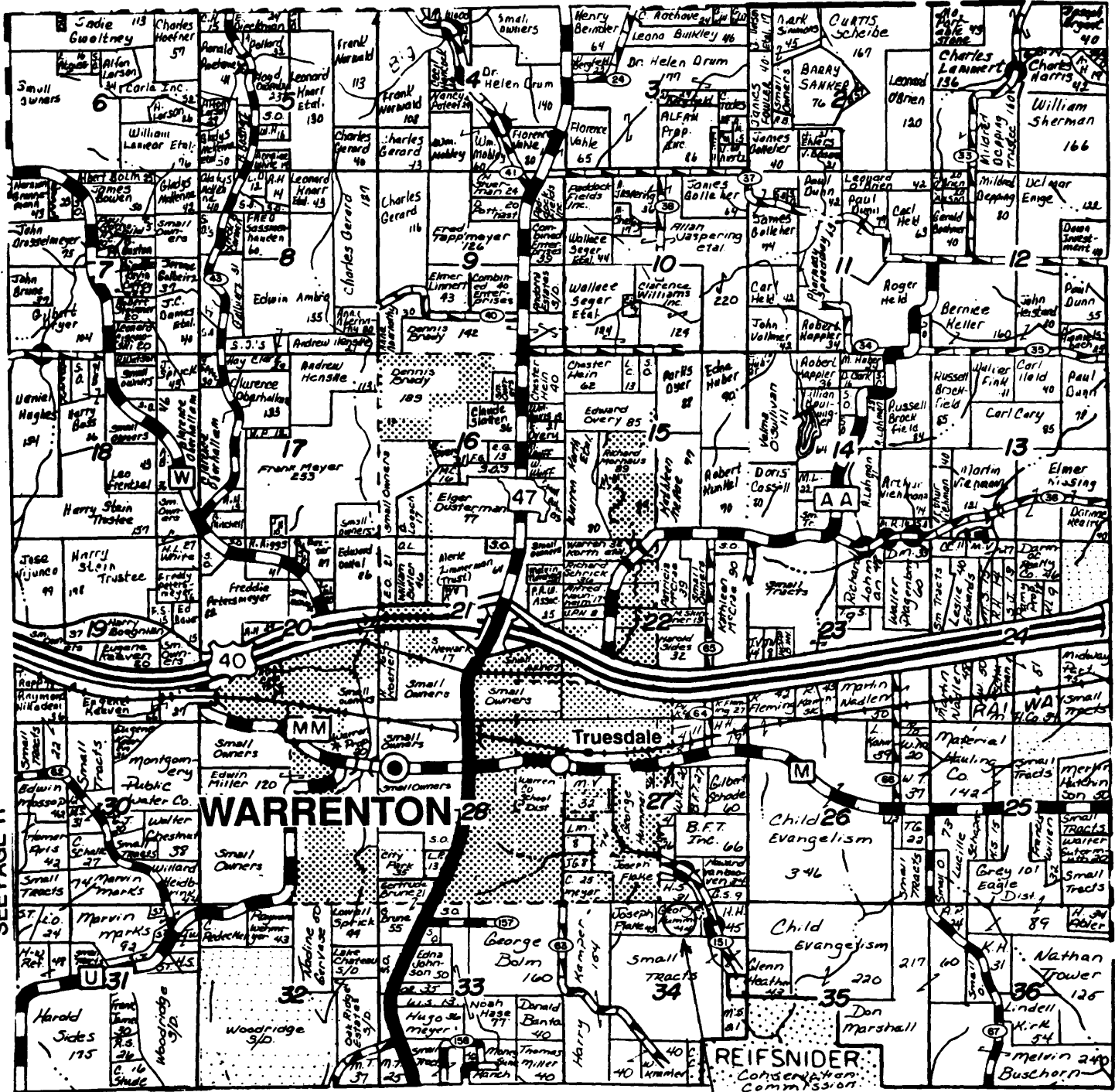
# Township 4 Range 2W

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MISSOURI LAND  
RECLAMATION COMMISSION

LINCOLN CO.

SEE PAGE 9



SEE PAGE 16

Hummel



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
SITE INFORMATION FORM

K JUL 6 1999 D

P.O. BOX 176  
JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>Vuilecott #1</b>		MISSOURI LAND RECLAMATION COMMISSION	PERMIT NUMBER <b>118</b>
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>			
COUNTY <b>Osage</b>	1/4 SECTION <b>SW 1/4</b>		SECTION <b>21</b>
TOWNSHIP <b>43 N</b>	RANGE <b>8 W</b>		ACRES <b>5</b>
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)			
MINERAL COMMODITY <b>Fire Clay</b>		ESTIMATED TONS/YEAR (FOR GRAVEL SITES)	
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>Kuster Real Estate c/o Mark Kuster</b>			
ADDRESS <b>Kuster Building</b>			
CITY <b>Linn</b>	STATE <b>MO</b>		ZIP CODE <b>65051</b>
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):			DATE OF AGREEMENT
<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT			
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc.</b>			
ADDRESS <b>P.O. Box 430</b>			
CITY <b>Fulton</b>	STATE <b>Missouri</b>		ZIP CODE <b>65251</b>
SOURCE OF RIGHT TO MINE (CHECK ONE): <input checked="" type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):			DATE OF AGREEMENT <b>02/21/28</b>
<input type="checkbox"/> LEASE <input type="checkbox"/> VERBAL AGREEMENT			
NOTE: Each site must be sown on a map and be included in a public notice and an approved mine plan.			

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

TYPE OF PLAN (CHECK ONE):

- ☐ SHORT TERM, FOR ONE PERMIT YEAR  
☒ LONG TERM, FOR PERIOD THROUGH DATE: 12/31/2050

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY.

This site was an partly open field and partly open timber. Slopes ranged from gentle in the field to moderate in the open timber. Topsoil was generally of moderate quality in the field and fair to poor in the timber.

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RECLAMATION COMMISSION

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

**B. SPOIL**

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

Spoil will be stored in piles around the pit during the mining process. This spoil will be placed in the lower end of the pit to form a dam during reclamation.

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MISSOURI LAND  
RECLAMATION COMMISSION

**C. ACID MATERIALS**

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

**PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)**

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

(See site maps)

YES

NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐☒

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

RECLAMATION PLAN - 10 CSR 40-10.0 2)(D)2.

A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
Mixture #1	Development	Fall

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

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MISSOURI LAND  
RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Tall Fescue Red Clover Wheat or Oats	25 5 30		

VEGETATION MIX #2	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
Mixture #2	Development	Spring

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchard Grass Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes)	10 6 30 20		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.



**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

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MISSOURI LAND  
RECLAMATION COMMISSION

**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done when mining is complete. The spoil will be backfilled in previously mined areas to form a dam and impoundment. Final grading of all disturbed areas will be completed within one year after mining ends. Areas affected, and no longer needed as part of the active operation will be graded within one year of the expiration of the permit during which the disturbance occurred.

**REPLACEMENT OF TOPSOIL**

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

**REVEGETATION**

The site will be seeded in the fall or spring after topsoil replacement.

AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) -12"

**D. USE OF LAND WHEN RECLAIMED**

Estimate acreage of each land use below, after reclamation:

ESTIMATED ACRES:

Wildlife (forest or other habitat with livestock excluded)

0

Agricultural (pasture, cropland, and horticultural)

0

Development (residential, industrial, and recreational)

4

Water impoundments (for wildlife, agricultural, or development)

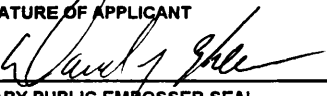
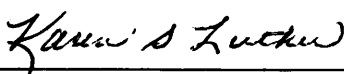
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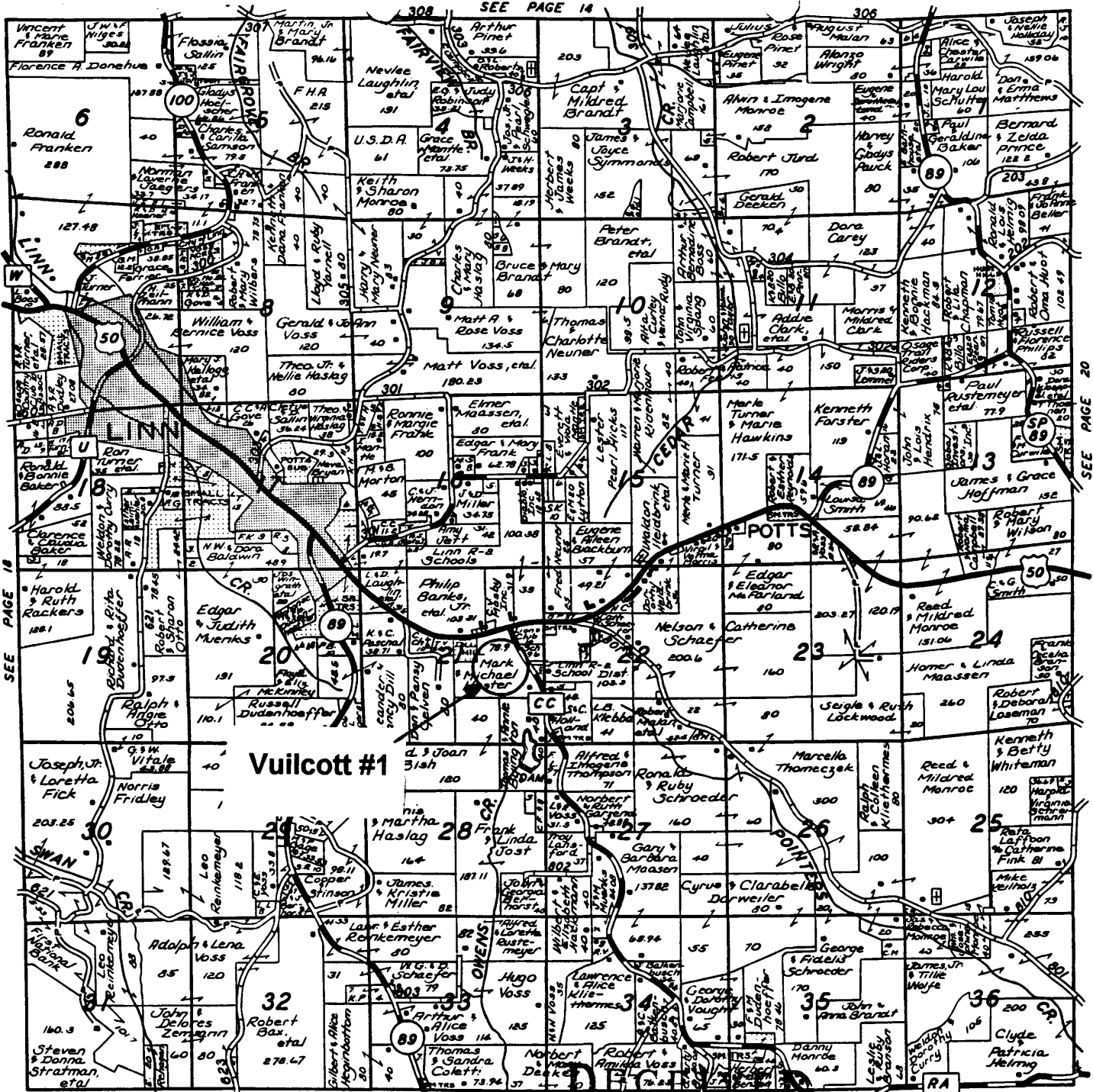
By my signature, I attest to the following:

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

RECEIVED  
AUG 11 1999

MISSOURI LAND  
RECLAMATION COMMISSION

SIGNATURE OF APPLICANT 		TITLE Mining Supervisor - Western District Mines	
NOTARY PUBLIC EMBOSSEER SEAL	STATE Missouri		COUNTY (OR CITY OF ST. LOUIS) Callaway
	SUBSCRIBED AND SWORN BEFORE ME, THIS 10th DAY OF August 19 99		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE 	MY COMMISSION EXPIRES 7/18/2003	KAREN S. LUTHER NOTARY PUBLIC STATE OF MISSOURI CALLAWAY COUNTY MY COMMISSION EXPIRES JULY 18, 2003
	NOTARY PUBLIC NAME (TYPED OR PRINTED) Karen S. Luther		
APPROVED BY (DIRECTOR'S REPRESENTATIVE)		DATE APPROVED	PERMIT NUMBER



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SEE PAGE 24

JUL 6 1996

# KUSTER

KUSTER BUILDING  
P.O. BOX 117  
LINN, MISSOURI 65051

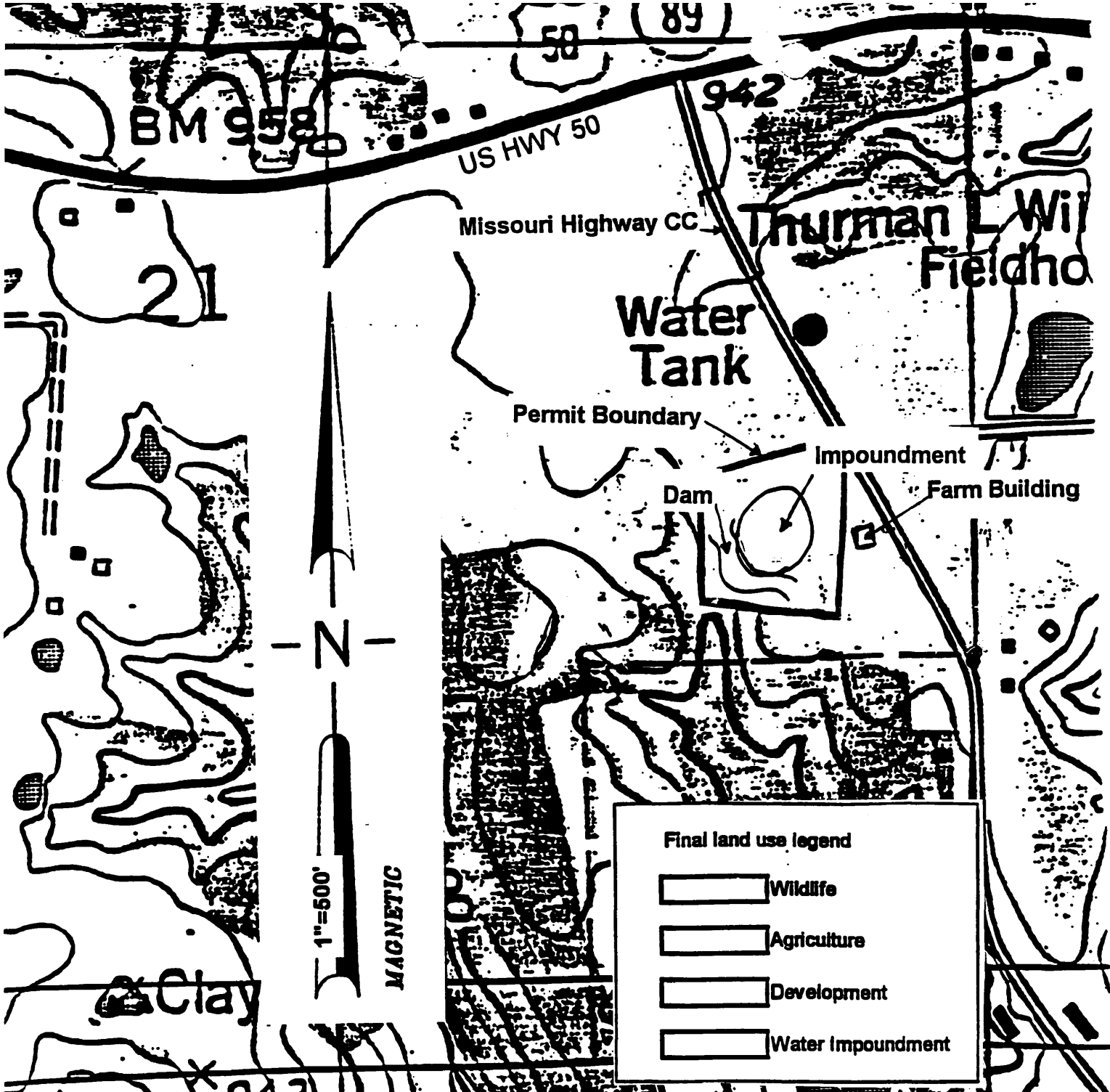


**REAL ESTATE**  
**ABSTRACTS**  
**TITLE INSURANCE**  
**RENTALS**

MISSOURI LAND  
RECLAMATION COMMISSION

MARK A. KUSTER, Broker  
CECIL W. KUSTER, GRI, Broker  
OFFICE: (314) 897-2122  
HOME: (314) 897-4106  
or 897-2296





## Harbison-Walker Refractories Company

P. O. Box 430, Fulton, Missouri 65251

Property:

Vuilecott

Property

Project:

Land Reclamation Perm

Final Land Use

Location: Sect. 21. T. 43 N., R. 8 W.

Osage County, Missouri

Designed by: DJK

Date: April 14, 1999

REC  
AUG  
MISSOURI LAND RECLAMATION  
AUG 11 1999  
MISSOURI LAND RECLAMATION

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
SITE INFORMATION FORM

RECEIVED  
OCT 17 2001  
MISSOURI LAND  
RECLAMATION CO.

P.O. BOX 176  
JEFFERSON CITY, MO 65102

SITE NAME OR NUMBER <b>Wilson Heirs Pits 1 and 3</b>		PERMIT NUMBER <b>118</b>
COMPANY NAME <b>A. P. Green Refractories, Inc.</b>		
COUNTY <b>Franklin</b>	1/4 SECTION <b>E 1/2</b>	SECTION <b>20</b>
TOWNSHIP <b>42 N</b>	RANGE <b>3 W</b>	ACRES <b>5</b>
RIVER OR STREAM NAME (FOR IN-STREAM ACRES)		
MINERAL COMMODITY <b>Fire Clay</b>		ESTIMATED TONS/YEAR (FOR GRAVEL SITES)
NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) <b>A. P. Green Industries, Inc.</b>		
ADDRESS <b>P. O. Box 430</b>		
CITY <b>Fulton</b>	STATE <b>MO</b>	ZIP CODE <b>65251</b>
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):		DATE OF AGREEMENT <b>05/04/61</b>
MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>A. P. Green Refractories, Inc.</b>		
ADDRESS <b>P.O. Box 430</b>		
CITY <b>Fulton</b>	STATE <b>Missouri</b>	ZIP CODE <b>65251</b>
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input checked="" type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):		DATE OF AGREEMENT <b>05/04/61</b>
NOTE: Each site must be sown on a map and be included in a public notice and an approved mine plan.		

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

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OCT 17 2001

TYPE OF PLAN (CHECK ONE):

☐ SHORT TERM, FOR ONE PERMIT YEAR

☒ LONG TERM, FOR PERIOD THROUGH DATE: 12/31/2007

MISSOURI LAND  
RECLAMATION COMMISSION

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY

These two pits were located in gently to moderately sloping ground. The primary vegetative cover was mature standing timber. Topsoil in the area was moderate to poor typical of standing timber.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

-12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

Prior to topsoil removal and immediately following any clearing of vegetation, appropriate sediment control measures will be installed including straw bale dikes, silt fences, rock check dams or sediment basins in any combination depending on site specific conditions. Topsoil will be removed using rubber-tired scrapers and/or bulldozers. The topsoil will be stored near the pit within the permitted pit area. We will remove the surficial material from all areas to be disturbed before mining or stripping begins.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

Surficial material will be stored in gently sloping piles and will be seeded if necessary with a cover crop to control any erosion.

**B. SPOIL**

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

Spoil from the excavation will be either backfilled into the pit or placed on the down hill side of the pit and used for a dam.

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OCT 17 2001

MISSOURI LAND  
RECLAMATION COMMISSION**C. ACID MATERIALS**

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None

**PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)**

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

(See site maps)

YES NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐☒

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

## A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1	PURPOSE OR LAND USE	B. SEEDING OR PLANT TIME
Mixture #1	Wildlife	Fall

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

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OCT 17 2001

MISSOURI LAND  
RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchardgrass	10		
Timothy	10		
Red Clover	5		
Korean Lespedeza	5		
Wheat or Oats	30		
Serecea Lespedeza (on slopes)	10		

VEGETATION MIX #2	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
Mixture #2	Wildlife	Spring

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Orchard Grass	10		
Korean Lespedeza	6		
Wheat or Oats	30		
Serecea Lespedeza (On Slopes)	20		

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.



**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

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RECLAMATION COMMISSION**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will be graded within one year of the expiration of the permit during which the disturbance occurred.

**REPLACEMENT OF TOPSOIL**

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance with MO 10CSR-40.10.050 (A)(10)(A).

**REVEGETATION**

The site will be seeded in the fall or spring after topsoil replacement.

**AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)****-12"****D. USE OF LAND WHEN RECLAIMED***Estimate acreage of each land use below, after reclamation:***ESTIMATED ACRES:**

Wildlife (forest or other habitat with livestock excluded)

2

Agricultural (pasture, cropland, and horticultural)

0

Development (residential, industrial, and recreational)

1

Water impoundments (for wildlife, agricultural, or development)

2

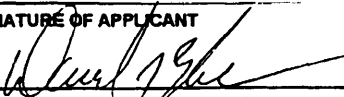
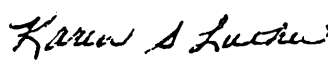

By my signature, I attest to the following:

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

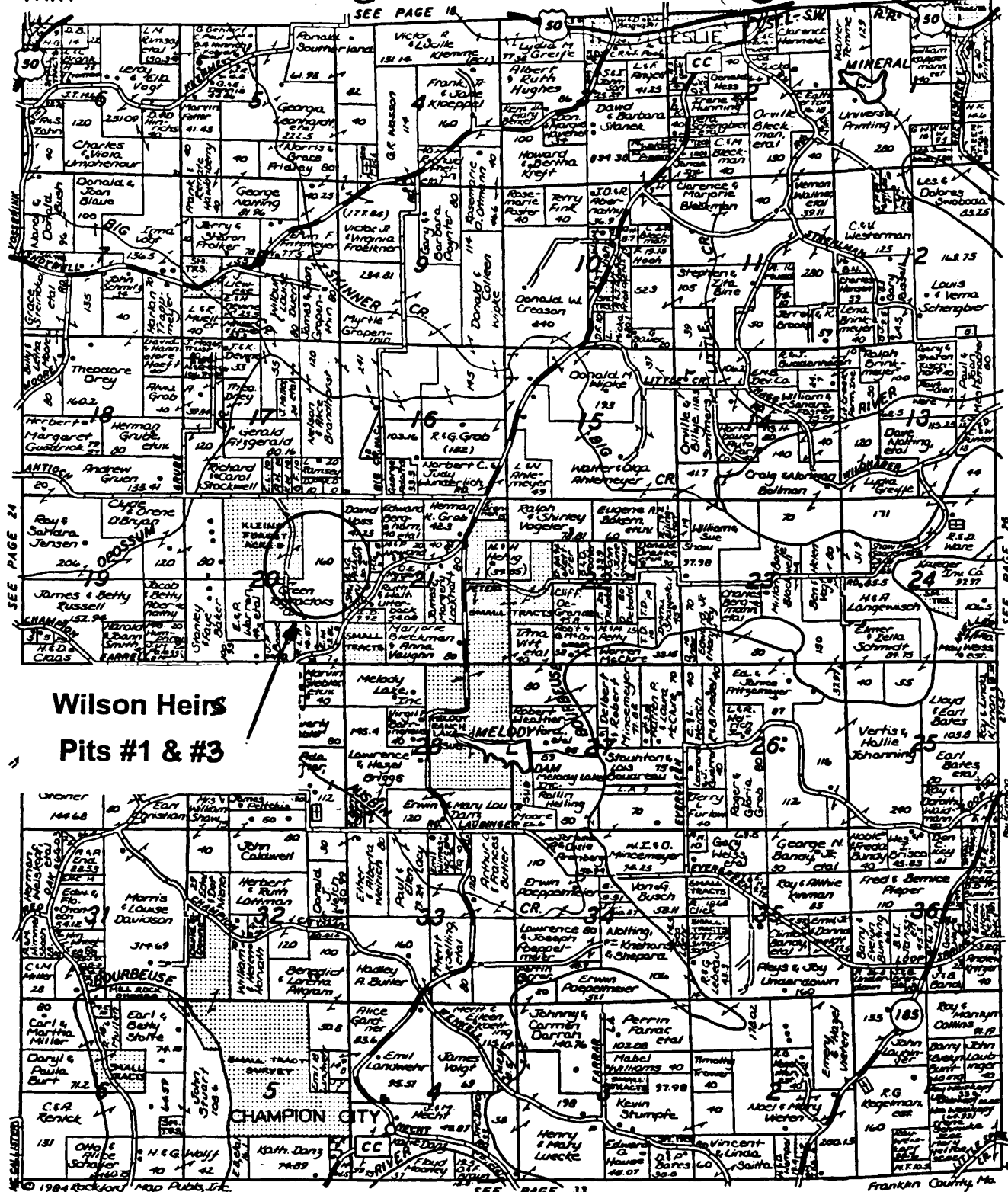
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RECLAMATION COMMISSION

SIGNATURE OF APPLICANT 		TITLE Mining Supervisor - Western District Mines	
NOTARY PUBLIC EMBOSSEER SEAL	STATE Missouri		COUNTY (OR CITY OF ST. LOUIS) Callaway
	SUBSCRIBED AND SWORN BEFORE ME, THIS 10th DAY OF August 19 99		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE 	MY COMMISSION EXPIRES 7/18/2003	KAREN S. LUTHER NOTARY PUBLIC STATE OF MISSOURI CALLAWAY COUNTY MY COMMISSION EXPIRES JULY 18, 2003
	NOTARY PUBLIC NAME (TYPED OR PRINTED) Karen S. Luther		
APPROVED BY (DIRECTOR'S REPRESENTATIVE) 		DATE APPROVED	PERMIT NUMBER 0118

SEE PAGE 18

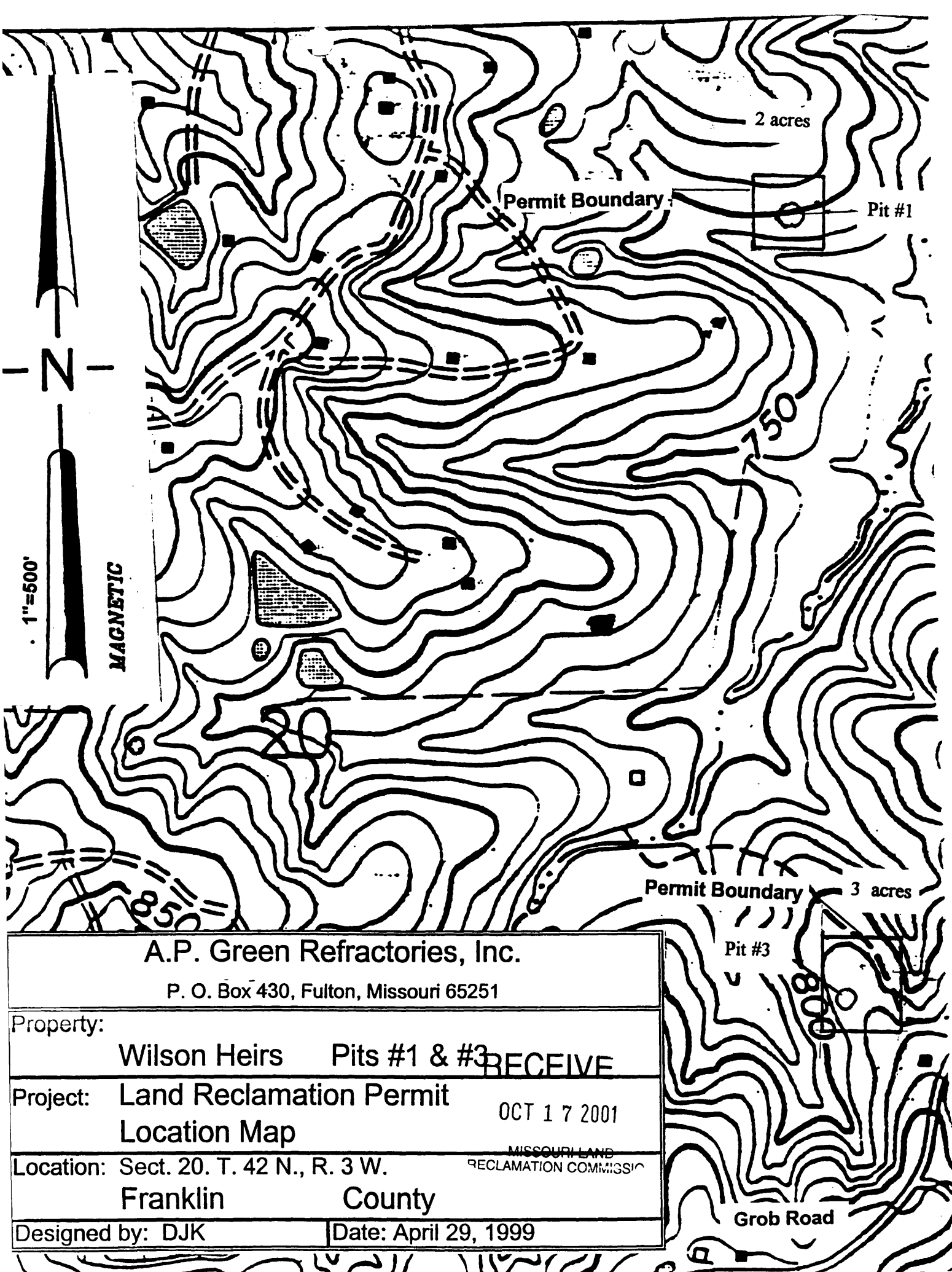


Wilson Heirs  
Pits #1 & #3

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MISSOURI LAND  
RECLAMATION CO. CLASSIC



A.P. Green Refractories, Inc.

P. O. Box 430, Fulton, Missouri 65251

Property:

Wilson Heirs      Pits #1 & #3

Project: Land Reclamation Permit  
Location Map

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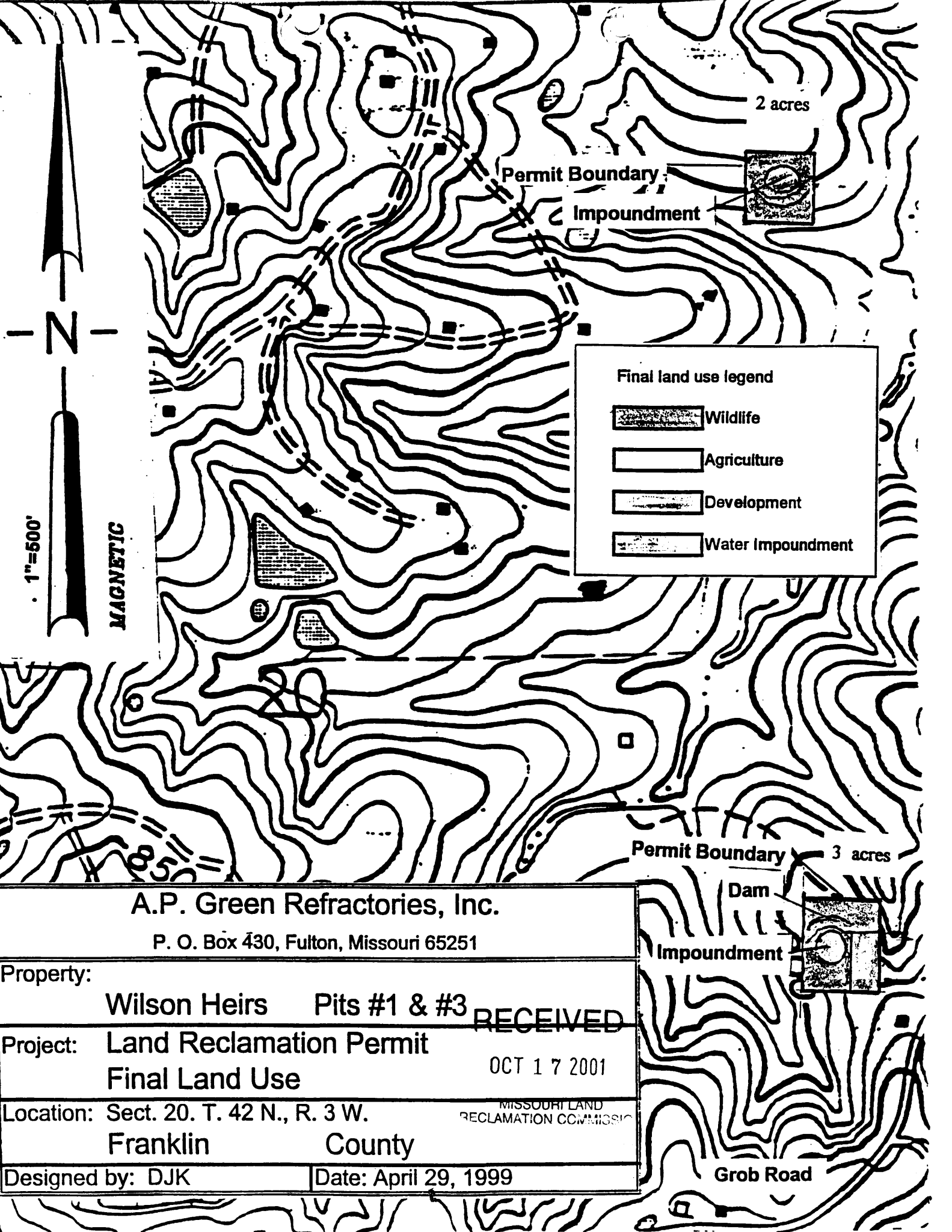
Location: Sect. 20. T. 42 N., R. 3 W.  
Franklin County

MISSOURI LAND  
RECLAMATION COMMISSION

Designed by: DJK

Date: April 29, 1999

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2 acres

Permit Boundary

Impoundment

Final land use legend

Wildlife

Agriculture

Development

Water Impoundment

1"=500'  
MAGNETIC

Permit Boundary

3 acres

Dam

Impoundment

A.P. Green Refractories, Inc.

P. O. Box 430, Fulton, Missouri 65251

Property:

Wilson Heirs Pits #1 & #3

Project:

Land Reclamation Permit

Final Land Use

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Location:

Sect. 20. T. 42 N., R. 3 W.

Franklin

County

MISSOURI LAND  
RECLAMATION COMMISSION

Designed by: DJK

Date: April 29, 1999

Grob Road